



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

NOTICE TO BIDDERS

ST. TAMMANY PARISH

Sealed bids will be received by the Department of Procurement, until **2:00 p.m., Wednesday, September 25, 2024**, and then opened and read publicly at that time by the Procurement Staff for the following project:

Bid # 24-40-2 – Lazy Wheels and Southern Manor Water Distribution

Each paper bid must be submitted in a sealed envelope. The outside of the envelope shall show the Name and Address of the Bidder, the State Contractor's License Number of the Bidder (if the work is estimated at \$50k or more), the Bid Name and the Bid Number.

The project classification is:

Municipal & Public Work Construction

This bid package is available online at www.bidexpress.com or LaPAC <https://wwwcfprd.doa.louisiana.gov/osp/lapac/pubmain.cfm>. It is the Vendor's responsibility to check Bid Express, or LaPAC frequently for any possible addenda that may be issued. The Parish is not responsible for a Vendor's failure to download any addenda documents required to complete a submission.

Bids will be received at 21454 Koop Dr., Suite 2F, Mandeville, LA 70471 from each bidder or his agent and given a written receipt, by certified mail with return receipt requested, or electronically at www.bidexpress.com.

A Non-Mandatory pre-bid meeting will be held at St. Tammany Parish Government Office Complex, Building "B" 21454 Koop Dr. Mandeville, LA 70471, 3rd Floor Staff Conference Room on Wednesday, September 4, 2024, from 2:00 PM to 4:00 PM. Attendance is strongly encouraged.

Procurement Department

BID PROPOSAL

ST. TAMMANY PARISH
GOVERNMENT



BID PACKAGE FOR
LAZY WHEELS AND SOUTHERN MANOR
WATER DISTRIBUTION
SLIDELL, LOUISIANA
PROJECT NOS. TU22000203, TU22000205

BID NO.: 24-40-2

August, 2024



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Instructions to Bidders

Bidders are urged to promptly review the requirements of this specification and submit questions for resolution as early as possible during the bid period. Questions or concerns must be submitted in writing to the Procurement Department no later than 2:00 CST seven (7) working days prior to the bid opening date. Otherwise, this will be construed as acceptance by the bidders that the intent of the specifications is clear and that competitive bids may be obtained as specified herein. Protests with regard to the specification documents will not be considered after bids are opened.

1. Bid security is required. Be sure that your bid includes such security as is necessary to meet Parish requirements and is properly signed. The bid must be fully completed. All applicable Louisiana license numbers must be affixed.
2. The Owner is the St. Tammany Parish Government (the "Parish").
3. The terms "he/his" and "it/its" may be used interchangeably.
4. The terms "Owner," the "Parish," and "St. Tammany Parish" may be used interchangeably.
5. The successful Bidder understands the limited contract time in the contract is **one hundred eighty (180) calendar days**, and shall submit any request for an extension of time in accordance with the General and Supplementary Conditions. Said request will reflect the days requested and the reason for same. No extension request is guaranteed or absolute.
6. Bidder specifically understands that acknowledgment of the General Conditions is required. Bidder specifically understands that signature of receipt of the General Conditions is mandated. **The Bidder's signature on the "Louisiana Uniform Public Work Bid Form" will serve as acknowledgment of the Bidder's receipt and understanding of the General Conditions as well as any Supplementary Conditions.**
7. ***If any additional work is performed by the contractor without written approval by owner, the cost of the work will be borne by the contractor and will not be reimbursed by the Parish.***
8. **Only** the Louisiana Uniform Public Bid Form, the Unit Price Form (if necessary), the bid security, and written evidence of authority of person signing the bid shall be submitted on or before the bid opening time and date provided for in the Bid Documents. Necessary copies of the Louisiana Uniform Public Work Forms and Unit Price Forms (if necessary) will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder's information and should not be used in submitting Bids.
9. All other documents and information required are to be submitted by the low Bidder within ten (10) days after the opening of the bids, and at the same time of day and location as given for the opening of the bids in the Bid Documents.
10. Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor's License Number of the Bidder (if work requires contractor's license), and the Project name and the Bid number. In the case of an electronic bid proposal, a contractor may submit an authentic digital signature on the electronic bid proposal accompanied by the contractor's license number, Project name and the Bid number.
11. The price quoted for the Work shall be stated in words and figures on the Bid Form, and in figures only on the Unit Price Form. The price in the Bid shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.

12. The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).
13. Only a Contractor licensed by the State to do the type of Work as indicated on the Notice to Bidders can submit a Bid. The Bidder's signature on the Bid Form certifies that he holds an active license under the provisions of Chapter 24 of Louisiana Revised Statutes Title 37. Failure to be properly licensed constitutes authority for the Owner to reject the Bid.
14. Bidders shall not attach any conditions or provisions to the Bid. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid.
15. A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.
16. Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the execution of the Contract.
17. A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened. A bid withdrawn under the provisions of LSA-R.S. 38:2214(C) cannot be resubmitted.
18. Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
19. No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. Inquiries received within seven (7) days prior to the day fixed for opening of the Bids may not be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of the Owner to send or failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid as submitted without Modification. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O).
20. The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal, illegible, or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder

is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.

21. Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.
22. Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.
23. It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.
24. Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.
25. Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and minimal delays of performance, shall at its sole expense and in the following order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not

furnished by Contractor; or, iii) use of the product, material or service in other than the specified operating conditions and environment.

26. Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
27. Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this Contract. Bidder shall also thoroughly examine and be familiar with drawings, Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form, instrument, Drawing or document or to visit the site and acquaint itself with existing conditions shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.
28. The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
29. When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or in conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
30. Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
31. In accordance with Louisiana Law, all Corporations (See LA R.S. 12:26.1) and Limited Liability Companies (See LA R.S. 12:1308.2) should be registered and in good standing with the Louisiana Secretary of State in order to hold a contract.
32. Sealed Bids shall be delivered to St. Tammany Parish Government at the office of **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and a receipt given, until the time and date denoted in Notice to Bidders, at which time and place the Bids shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38:2212(H), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Bids may also be mailed by certified mail to **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders. It is the responsibility of the Bidders to ensure that bids are delivered in a timely fashion. **Late bids, regardless of reason, will not be considered, and will be returned to bidder.**
33. Paper bids shall be placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these Instructions, and addressed:

**St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471**

34. See Notice to Bidders for availability of Drawings, Specifications and Contract Documents via electronic methods.

35. The successful Bidder shall be required to post in each direction a public information sign, 4' x 4' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.
36. The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility and qualifications of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. If the Contract is awarded, the Owner shall give the successful Bidder written notice of the award within forty-five (45) calendar days after the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.
37. At least three days prior to the execution of the Contract, the Contractor shall deliver to the Owner the required Bonds.
38. Failure of the successful Bidder to execute the Contract and deliver the required Bonds within ten (10) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited. Award may then be made to the next lowest responsible bidder.
39. In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and hold harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a Performance and Payment Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
40. No surety Company will be accepted as a bondsman which has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Service of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
41. In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):

Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.

42. Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent,

- bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time Contractor learns or has reason to know that the original surety is no longer financially viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due, or to become due to Contractor.
43. The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
 44. The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans, specifications, and other Contract Documents. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney's fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
 45. The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of the Contract.
 46. The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of the Work/Project by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
 47. Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law. Contractor agrees to execute an excerpt or extract of this agreement for recordation purposes. If Contractor fails to execute such an excerpt, then the Parish shall file and record the entire Contract and all attachments at the expense of Contractor and Parish is hereby authorized to deduct all related costs from any proceeds due to the Contractor.
 48. Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
 49. The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
 50. Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
 51. Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.

52. Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
53. Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, 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.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

54. The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract shall be designated by a separate document issued by the Office of Risk Management.
55. It is the intent of these instructions that they are in conformance with State Bid Laws. Should there be any discrepancy or ambiguity in these provisions, the applicable State Bid Law shall apply.
56. The letting of any public contract in connection with funds that are granted or advanced by the United States of America shall be subject to the effect, if any, of related laws of said United States and valid rules and regulations of federal agencies in charge, or governing use and payment of such federal funds.
57. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE these times. Any other protest shall be filed no later than ten (10) calendar days after: the opening of the bid; the basis of the protest is known; or the basis of the protest should have been known (whichever is earlier).
58. It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be

concise and logically presented to facilitate review by the Parish. The written protest shall include:

The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;

A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;

Copies of relevant documents;

All information establishing that the protester is an interested party and that the protest is timely; and

A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to St. Tammany Parish Government Department of Procurement, P.O. Box 628, Covington, LA 70434

The protest review shall be conducted by the Parish Legal Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals, must be filed with and received by the Department of Procurement BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

59. The last day to submit questions to Procurement shall be no later than 2:00 pm CST, seven (7) working days prior to the opening of bids and verification on comparable products will be no later than 2:00 pm CST, fourteen (14) working days prior to the opening date of the bid/proposal due date. Further, any questions or inquires must be submitted via fax to 985-898-5227, or via email to Procurement@stpgov.org. Any questions or inquiries received after the required deadline to submit questions or inquiries will not be answered.

Schedule of Events

	<u>Date</u>	<u>Time (CT)</u>
Bid Due Date	September 25, 2024	2:00 PM
Non-Mandatory Pre-Bid	September 4, 2024	2:00 PM
Inquiry Deadline	September 16, 2024	2:00 PM
Addendum Deadline	September 20, 2024	2:00 PM

NOTE: The Parish reserves the right to revise this schedule. Any such revision will be formalized by the issuance of an addendum to the Bid Request.

60. St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany Parish Government. At any time, St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.
61. Any action by the Parish to disqualify any Bidder on the grounds that they are not a responsible Bidder shall be conducted in accordance with LSA-R.S. 38:2212(X).
62. Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish

reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.

63. If any part of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

Section 03

Summary of Work

I. Work to Include:

The contractor must provide all labor, equipment, tools, testing, and materials necessary to complete the work in accordance with the construction drawings and project specifications for the Lazy Wheels and Southern Manor Water Distribution, Slidell, Louisiana.

II. Location of Work:

The work is located in the Southern Manor and Lazy Wheels Mobile Home Parks in Slidell, Louisiana adjacent to Louisiana Hwy 1090 and Herwig Bluff Road respectively.

Southern Manor
60375 N. Military Rd
Slidell, LA 70461

Lazy Wheels
59274 Herwig Bluff Road
Slidell, LA 70461

III. Documents: Bid Documents dated August 2024, and entitled:

Lazy Wheels and Southern Manor Water Distribution
BID No. 24-40-2

IV. OTHER REQUIREMENTS (as applicable)

When not otherwise specified herein, all work and materials shall conform to the requirements of the Louisiana Department of Transportation and Development hereafter called LDOTD (2016 Edition of Louisiana Standard Specifications for Roads and Bridges).

This project is federally grant funded and therefore requires the Contractor to have a Unique Entity Identification number (UEI). The Contractor should submit with their response their UEI number. If the Contractor does not have a UEI already, then they must register at the below link before an award can be made.

<https://sam.gov/content/entity-registration>

Table 3.1

Liquidated Damages	
Original Contract Amount	Daily Charge
Dollars	Dollars
0 - 250,000	500
250,000 – 1 Million	1,000
> 1 Million – 5 Million	1,500
> 5 Million – 10 Million	2,000
> 10 Million	3,000

- Parish reserves the right to increase the Daily charge rate due to additional provisions required in order to complete the project as described in the specifications

Section 04

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. Tammany Parish Government
21454 Koop Dr., Suite 2F
Mandeville, La 70471

(Owner to provide name and address of owner)

BID FOR: Lazy Wheels and Southern Manor
Water Distribution, Slidell, Louisiana
Project Nos. TU22000203, TU22000205
Bid No. 24-40-2

(Owner to provide name of project and other identifying information.)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Professional Engineering Consultants Corporation and dated: August 2024.

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) .

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

Dollars (\$) _____

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 Add for additional 10" HDPE, DR11 Open Cut and Automatic Flushing Station for the lump sum of:

Dollars (\$) _____

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

NOT APPLICABLE Dollars (\$) N/A _____

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

NOT APPLICABLE Dollars (\$) N/A _____

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO:

St. Tammany Parish Government
 21454 Koop Drive, Suite 2F
 Mandeville, LA. 70471
(OWNER TO PROVIDE NAME AND ADDRESS OF OWNER)

BID FOR:

Lazy Wheels and Southern Manor Water Distribution
 Project Nos. TU22000203, TU22000205
 Bid No. 24-40-2
(OWNER TO PROVIDE PROJECT NAME & OTHER IDENTIFYING INFO)

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Mobilization & Demobilization (TU22000203)	
REF NO.:	QUANTITY		UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
1	1		LUMP SUM		
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Construction Layout (TU22000203)	
REF NO.:	QUANTITY		UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
2	1		LUMP SUM		
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	8" DIA. HDPE, DR 11 Water Main (Open Cut) (TU22000203)	
REF NO.:	QUANTITY		UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
3	632		LINEAR FOOT		
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	10" DIA. HDPE, DR 11 Water Main (Open Cut) (TU22000203)	
REF NO.:	QUANTITY		UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
4	290		LINEAR FOOT		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 6" PVC Drain Line (Open Cut) (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
5	30	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # Fire Hydrant Assembly W/Concrete Pad (Mueller Super Centurion 250 HS Or Approved Equal) (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
6	2	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 2" DIA. Gate Valve With Valve Box (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
7	1	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 8" DIA. Gate Valve With Valve Box (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
8	2	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 10" DIA. Gate Valve With Valve Box (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
9	6	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" Bronze Service Saddles And Corporation Stop (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
Version 2017 Q2 10	18	EACH		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	3/4" CTS PE 4710 Water Service Line (Open Cut) (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
11	320	LINEAR FOOT							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	3/4" x 5/8" Double Water Meter And Cast Iron Water Meter Box With Curb Stop (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
12	13	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	3/4" x 5/8" Single Water Meter And Cast Iron Water Meter Box With Curb Stop (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
13	5	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Water Meters (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
14	31	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	2" Flush Hydrant Assembly (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
15	2	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Automatic Flushing Station (Hydro-Guard By Mueller Or Approved Equal) (TU22000203)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE		UNIT PRICE EXTENSION (Quantity times unit price)			
Version 2017 Q2 16	1	EACH							

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Remove and Replace Limestone (8-Inch Thick) (TU22000203)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
17	400	SQUARE YARD					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	3/4" Brass U-Branch Service Fitting (Mueller Or Equal) (TU22000203)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
18	13	EACH					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Sampling Station (Kupferle #88-SS Or Approved Equal) (TU22000203)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
19	1	EACH					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Temporary Signage, Traffic Control And Barricades (TU22000203)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
20	1	LUMP SUM					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Mobilization & Demobilization (TU22000205)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
21	1	LUMP SUM					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Construction Layout (TU22000205)		
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)		
Version 2017 Q2 22	1	LUMP SUM					

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 10" DIA. HDPE, DR 11 Water Main (Open Cut) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
23	4215	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 10" DIA. HDPE, DR 11 Water Main (Directional Bore) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
24	177	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # Fire Hydrant Assembly W/Concrete Pad (Mueller Super Centurion 250 HS Or Approved Equal) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
25	9	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 10" DIA. Gate Valve With Valve Box (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
26	24	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" Bronze Service Saddles And Corporation Stop (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
27	51	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" CTS PE 4710 Water Service Line (Open Cut) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
Version 2017 Q2 28	625	LINEAR FOOT		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" CTS PE 4710 Water Service Line (Bore) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
29	500	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" x 5/8" Double Water Meter And Cast Iron Water Meter Box With Curb Stop (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
30	32	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 3/4" x 5/8" Single Water Meter And Cast Iron Water Meter Box With Curb Stop (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
31	19	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # Water Meters (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
32	83	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # 2" Flush Hydrant Assembly (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
33	3	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # Remove and Replace Asphalt (Including Saw Cut) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
Version 2017 Q2 34	125	SQUARE YARD		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Remove and Replace Concrete (Including Saw Cut) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
35	30	SQUARE YARD							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Remove and Replace Concrete Curb (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
36	100	LINEAR FOOT							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	3/4" Brass U-Branch Service Fitting (Mueller Or Equal) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
37	32	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Sampling Station (Kupferle #88-SS Or Approved Equal) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
38	2	EACH							
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	Temporary Signage, Traffic Control And Barricades (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
39	1	LUMP SUM							
Description:		<input type="checkbox"/> BASE BID	OR	<input checked="" type="checkbox"/> ALT #	10" DIA. HDPE, DR11 Water Main (Open Cut) (TU22000205)				
REF NO.:	QUANTITY	UNIT OF MEASURE		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)				
Version 2017 Q2 AA-1	455	LINEAR FOOT							

Description: <input type="checkbox"/> BASE BID OR <input checked="" type="checkbox"/> ALT # Automatic Flushing Station (Hydro-Guard By Mueller or Approved Equal)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
AA-2	1	EACH		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

Section 05

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2224 and 38:2227
FOR BIDDERS FOR PUBLIC WORKS CONTRACTS**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, who is seeking a public contract with St. Tammany Parish Government.

2. That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

3. That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

4. If affiant is a sole proprietor, that after July 2, 2010, he/she has not been convicted of, or has not entered a plea of guilty or *nolo contendere* to any of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).

5. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent ownership in the bidding entity, has been convicted of, or has entered a plea of guilty or *nolo contendere* to any

of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).

6. If affiant is a sole proprietor, that neither affiant, nor his/her immediate family is a public servant of St. Tammany Parish Government or the Contract is not under the supervision or jurisdiction of the public servant's agency.

7. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no public servant of St. Tammany Parish Government, or his/her immediate family, either individually or collectively, has more than a 25% ownership interest in the entity seeking the Contract with St. Tammany Parish Government if the Contract will be under the supervision or jurisdiction of the public servant's agency.

Printed Name: _____

Title: _____

Entity name: _____

**THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.**

Notary Public

Print Name: _____

Notary I.D./Bar No.: _____

My commission expires: _____

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2212.10 CONFIRMING
REGISTRATION AND PARTICIPATION IN A STATUS VERIFICATION
SYSTEM**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, a private employer seeking a bid or a contract with St. Tammany Parish Government for the physical performance of services within the State of Louisiana.
2. That affiant 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; and
3. That affiant 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.
4. That affiant shall require all subcontractors to submit to the affiant a sworn affidavit verifying compliance with this law.

Printed Name: _____

Title: _____

Name of Entity: _____

**THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.**

Notary Public
Print Name: _____
Notary I.D./Bar No.: _____
My commission expires: _____



Section 06

INSURANCE REQUIREMENTS*

Construction Project: LAZY WHEELS AND SOUTHERN MANOR WATER DISTRIBUTION

Project/Quote/Bid#: 24-40-2_____

*****IMPORTANT – PLEASE READ*****

Prior to submitting your quote or bid, it is recommended that you review these insurance requirements with your insurance broker/agent.

These requirements modify portions of the insurance language found in the General Conditions and/or Supplementary General Conditions; however, there is no intention to remove all sections pertaining to insurance requirements and limits set forth in the General Conditions and/or Supplementary General Conditions, only to amend and specify those items particular for this Project.

- A. The Provider shall secure and maintain at its expense such insurance that will protect it and St. Tammany Parish Government (the "Parish") from claims for bodily injury, death or property damage as well as from claims under the Workers' Compensation Acts that may arise from the performance of services under this agreement. All certificates of insurance shall be furnished to the Parish and provide thirty (30) days prior notice of cancellation to the Parish, in writing, on all of the required coverage.
- B. All policies shall provide for and certificates of insurance shall indicate the following:
1. Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, 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.
 2. Additional Insured: St. Tammany Parish Government shall be named as Additional Insured with respect to general liability, automobile liability and excess liability coverages, as well as marine liability and pollution/environmental liability, when those coverages are required or necessary.
 3. Payment of Premiums: The insurance companies issuing the policy or policies will have no recourse against St. Tammany Parish Government for payment of any premiums or for assessments under any form of policy.
 4. Project Reference: The project(s) and location(s) shall be referenced in the Comment or Description of Operations section of the Certificate of Insurance (Project ##-###, or Bid # if applicable, Type of Work, Location).
- C. Coverage must be issued by insurance companies authorized to do business in the State of Louisiana. Companies must have an A.M. Best rating of no less than A-, Category VII. St. Tammany Parish Risk Management Department may waive this requirement only for Workers Compensation coverage at their discretion.

Provider shall secure and present proof of insurance on forms acceptable to St. Tammany Parish Government, Office of Risk Management no later than the time of submission of the Contract to the Parish. However, should any work performed under this Contract by or on behalf of Provider include exposures that are not covered by those insurance coverages, Provider is not relieved of its obligation to maintain appropriate levels and types of insurance necessary to protect itself, its agents and employees, its subcontractors, St. Tammany Parish Government (Owner), and all other interested third parties, from any and all claims for damage or injury in connection with the services performed or provided throughout the duration of this Project, as well as for any subsequent periods required under this Contract.

The insurance coverages checked (✓) below are those required for this Contract.

- 1. **Commercial General Liability*** insurance – **Occurrence Form** - with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence / \$2,000,000 General Aggregate and \$2,000,000 Products-Completed Operations. Contracts over \$1,000,000 may require higher limits. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal/Advertising Injury;
 - e) Broad form property damage (for Projects involving work on Parish property);
 - f) Explosion, Collapse and Damage to underground property.
 - g) Additional Insured forms CG 2010 and CG 2037 in most current edition are required.

- 2. **Business Automobile Liability*** insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any auto;
 - or**
 - b) Owned autos; **and**
 - c) Hired autos; **and**
 - d) Non-owned autos.

- 3. **Workers' Compensation/Employers Liability insurance*** - Workers' Compensation coverage as required by State law. Employers' liability limits shall be a minimum of \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate. When water activities are expected to be performed in connection with this project, coverage under the USL&H Act, Jones Act and/or Maritime Employers Liability (MEL) must be included. **Coverage for owners, officers and/or partners in any way engaged in the Project shall be included in the policy.** The names of any excluded individual must be shown in the Description of Operations/Comments section of the Certificate.

- 4. **Pollution Liability and Environmental Liability*** insurance in the minimum amount of \$1,000,000 per occurrence / \$2,000,000 aggregate 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, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.

5. **Contractor's Professional Liability/Errors and Omissions*** insurance in the sum of at least \$1,000,000 per claim / \$2,000,000 aggregate is required when work performed by Contractor or on behalf of Contractor includes professional or technical services including, but not limited to, construction administration and/or management, engineering services such as design, surveying, and/or inspection, technical services such as testing and laboratory analysis, and/or environmental assessments. An occurrence basis policy is preferred.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.

6. **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

***Excess/Umbrella Liability** insurance may be provided to meet the limit requirements for any Liability coverage. For example: if the General Liability requirement is \$3,000,000 per occurrence, but the policy is only \$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.)

7. **Owners Protective Liability (OPL)** shall be furnished by the Contractor and shall provide coverage in the minimum amount of \$1,000,000 CSL each occurrence / \$1,000,000 aggregate. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the policy.**

8. **Builder's Risk Insurance** written as an "all-risk" policy providing coverage in an amount at or greater than one hundred percent (100%) of the completed value of the contracted project. Any contract modifications increasing the contract cost will require an increase in the limit of the Builder's Risk policy. Deductibles should not exceed \$5,000 and Contractor shall be responsible for all policy deductibles. This insurance shall cover materials at the site, stored off the site, and in transit. The Builder's Risk Insurance shall include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**

9. **Installation Floater Insurance**, on an "all-risk" form, shall be furnished by Contractor and carried for the full value of the materials, machinery, equipment and labor for each location. The Contractor shall be responsible for all policy deductibles. The Installation Floater Insurance shall provide coverage for property owned by others and include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**

- D. All policies of insurance shall meet the requirements of the Parish prior to the commencing of any work. The Parish has the right, but not the duty, to approve all insurance coverages prior to commencement of work. If any of the required policies are or become unsatisfactory to the Parish as to form or substance; or if a company issuing any policy is or becomes unsatisfactory to the Parish, the Provider shall promptly obtain a new policy, timely submit same to the Parish for approval, and submit a certificate thereof as provided above. The Parish agrees not to unreasonably withhold approval of any insurance carrier selected by Provider. In the event that Parish cannot agree or otherwise authorize a carrier, Provider shall have the option of selecting and submitting a new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Provider and thereafter deduct from Provider's fee the cost of such insurance.
- E. Upon failure of Provider to furnish, deliver and/or maintain such insurance as above provided, this contract, at the election of the Parish, may be declared suspended, discontinued or terminated. Failure of the Provider to maintain insurance shall not relieve the Provider from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Provider concerning indemnification.
- F. Provider shall maintain a current copy of all annual insurance policies and agrees to provide a certificate of insurance to the Parish on an annual basis or as may be reasonably requested for the term of the contract or any required Extended Reporting Period. 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 Parish with annual renewal certificates of insurance evidencing continued coverage, without any prompting by the Parish.
- G. It shall be the responsibility of Provider to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Provider. Provider shall further ensure the Parish is named as an additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project.
- H. Certificates of Insurance shall be issued as follows:

**St. Tammany Parish Government
Attn: Risk Management
P O Box 628
Covington, LA 70434**

To avoid contract processing delays, be certain the project name/number is included on all correspondence including Certificates of Insurance.

***NOTICE: St. Tammany Parish Government reserves the rights to remove, replace, make additions to and/or modify any and all of the insurance requirements at any time.**

Any inquiry regarding these insurance requirements should be addressed to:

**St. Tammany Parish Government
Office of Risk Management
P O Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

Section 07

Project Signs

1. General

- a. Work to include providing and installing two (2) project signs, one at the beginning of each MHP.

2. Materials


- a. The printed project sign(s) shall be 3/8" primed Medium Density Overlay (MDO) **OR** 3-millimeter corrugated plastic secured to exterior plywood (4' x 4').
- b. Contractor shall not use previously provided templates and/or fonts.

3. Execution

- a. The sign(s) shall be printed on a project-by-project basis in black and white, using the template and font provided to the Contractor by the St. Tammany Parish Government Project Manager.
- b. All signage proofed and approved by State Tammany Parish Government before project sign(s) are to be produced by the Contractor.
- c. Exact placement of the project sign(s) must be coordinated with, and approved by, the St. Tammany Parish Government Project Manager prior to sign installation.
- d. The sign(s) is to be installed such that the bottom of the sign is a minimum of 5' above the existing ground elevation.
- e. Sign(s) is to be maintained throughout the period of construction. If sign(s) is damaged or destroyed, repair and/or replacement of sign(s) will be at Contractor's expense.
- f. Contractor is responsible for the removal of all project signs upon issuance of final acceptance by the St. Tammany Parish Government Project Manager at no direct pay.
- g. Cost to be included in "Temporary Signage, Traffic Control, & Barricades"

Blank Template of Parish Project Sign:

PROGRESS



MICHAEL B. COOPER
Parish President

Councilmember Name
Council District X

\$XXX,XXX.XX

Project Name
Description of
Project Work

Short Description of Project stated here
(if deemed applicable by the Parish)

Name of Street, Bridge,
Subdivision, etc. stated here

Total Dollar \$
amount specified here

Example of a Completed Parish Project Sign:

PROGRESS



MICHAEL B. COOPER
Parish President

RYKERT O. TOLEDANO, JR
Council District 5

\$514,444.40

**Dove Park
Subdivision Drainage**
Drainage Improvements along
Swallow St., Sparrow St.,
Partridge St. and Egret St.

Section 08

General Conditions for St. Tammany Parish Government

This index is for illustrative purposes only and is not intended to be complete nor exhaustive.

All bidders/contractors are presumed to have read and understood the entire document. Some information contained in these conditions may not be applicable to all projects.

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01.00 DEFINITIONS OF TERMS

Whenever used in these General Conditions or in other Contract Documents, the following terms shall have the meanings indicated, and these shall be applicable to both the singular and plural thereof.

- 01.01 A.A.S.H.T.O American Association of State Highway and Transportation Officials. When A.A.S.H.T.O. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this association and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.02 A.C.I American Concrete Institute. When A.C.I. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this institute and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.03 Addenda Written or graphic instruments issued prior to the opening of bids which clarify, correct, modify or change the bidding or Contract Documents.
- 01.04 Advertisement The written instrument issued by the Owner at the request of the Owner used to notify the prospective bidder of the nature of the Work. It becomes part of the Contract Documents.
- 01.05 Agreement The written agreement or contract between the Owner and the Contractor covering the Work to be performed and the price that the Owner will pay. Other documents, including the Proposal, Addenda, Specifications, plans, surety, insurance, etc., are made a part thereof.
- 01.06 Application for Payment The form furnished by the Owner which is to be used by the Contractor in requesting incremental (progress) payments and which is to include information required by Section 28.01 and an affidavit of the Contractor. The affidavit shall stipulate that progress payments theretofore received from the Owner on account of the Work have been applied by Contractor to discharge in full of all Contractor's obligations reflected in prior applications for payment.
- 01.07 A.S.T.M. American Society of Testing Materials. When A.S.T.M. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this society and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.08 Bid The offer or Proposal of the Bidder submitted on the prescribed form setting forth all the prices for the Work to be performed.
- 01.09 Bidder Any person, partnership, firm or corporation submitting a Bid for the Work.
- 01.10 Bonds Bid, performance and payment bonds and other instruments of security, furnished by the Contractor and its surety in accordance with the Contract Documents and Louisiana law.
- 01.11 Change Order A written order to the Contractor signed by the Owner authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time after execution of the Agreement.
- 01.12 Contract Documents The Agreement, Addenda, Contractor's Bid and any documentation accompanying or post-bid documentation when attached as an exhibit, the Bonds, these General Conditions, the Advertisement for Bid, Notice to Contractor, all supplementary conditions, the Specifications, the Drawings, together with all Modifications issued after the execution of the Agreement.
- 01.13 Contract Price The total monies payable to the Contractor under the Contract Documents.

- 01.14 Contract Time The number of consecutive calendar days stated in the Agreement for the completion of the Work.
- 01.15 Contractor The person, firm, corporation or Contractor with whom the Owner has executed the Agreement.
- 01.16 Defective Work When work which is unsatisfactory, faulty or deficient for any reason whatsoever, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Owner's recommendation or acceptance.
- 01.17 Drawings The Drawings and plans which show the character and scope of the Work to be performed and which have been prepared or approved by the Owner and are referred to in the Contract Documents.
- 01.18 Field Order A written order issued by the Owner or his agent which clarifies or interprets the Contract Documents.
- 01.19 Modification (a) A written amendment of the Contract Documents signed by both parties, (b) A Change Order, (c) A written clarification or interpretation issued by the Owner or his agent. Modification may only be issued after execution of the Agreement.
- 01.20 Notice of Award The written notice by Owner to the lowest responsible Bidder stating that upon compliance of the conditions enumerated in the Notice of Award, or enumerated in the Bid documents, the Owner will deliver the Contract Documents for signature. The time for the delivery of the Contract Documents can be extended in conformance with Louisiana Law.
- 01.21 Notice to Contractor Instructions, written or oral given by Owner to Contractor and deemed served if given to the Contractor's superintendent, foreman or mailed to Contractor at his last known place of business.
- 01.22 Notice to Proceed A written notice given by the Owner fixing the date on which the Contract Time will commence, and on which date the Contractor shall start to perform his obligation under the Contract Documents. Upon mutual consent by both parties, the Notice to Proceed may be extended.
- 01.23 Owner St. Tammany Parish Government, acting herein through its duly constituted and authorized representative, including but not limited to the Office of the Parish President or its designee, its Chief Administrative Officer, and/or Legal Counsel. St. Tammany Parish Government (hereinafter, the "Parish") and Owner may be used interchangeably.
- 01.24 Project The entire construction to be performed as provided in the Contract Documents.
- 01.25 Project Representative The authorized representative of the Owner who is assigned to the Project or any parts thereof.
- 01.26 Proposal The Bid submitted by the Bidder to the Owner on the Proposal form setting forth the Work to be done and the price for which the Bidder agrees to perform the Work.
- 01.27 Shop Drawings All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, Subcontractor, Manufacturer, Supplier or Distributor and which illustrate the equipment, material or some portion of the Work.
- 01.28 Specifications The Instructions to Bidders, these General Conditions, the Special Conditions and the Technical Provisions. All of the documents listed in the "Table of Contents."
- 01.29 Subcontractor An individual, firm or corporation having a direct Contract with the Contractor or with any other Subcontractor for the performance of a part of the Project Work.
- 01.30 Substantial Completion The date as certified by the Owner or its agent when the construction of the Project or a specified part thereof is sufficiently complete in accordance with the Contract Documents so that the Project or specified part can be utilized for the

purposes for which it was intended; or if there is no such certification, the date when final payment is due in accordance with Section 28.

- 01.31 Superintendent Contractor's site representative. The person on the site who is in full and complete charge of the Work.
- 01.32 Time Unless specifically stated otherwise, all time delays shall be calculated in calendar days.
- 01.33 Work Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by the Contractor under the Contract Documents, usually including the furnishing of all labor, materials, equipment and other incidentals.
- 01.34 The terms "he/himself" may be used interchangeably with "it/itself."

02.00 PROPOSAL

- 02.01 All papers bound with or attached to the Proposal Form are a necessary part thereof and must not be detached.
- 02.02 For submitting Bids, the only forms allowed shall be the "Louisiana Uniform Public Work Bid Form", "Louisiana Uniform Public Works Bid Form Unit Price Form" (if necessary), the Bid Bond, and written evidence of authority of person signing the bid. Necessary copies of the Louisiana Uniform Public Work Forms will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder's information and should not be used in submitting Bids.
- 02.03 Proposal forms must be printed in ink or typed, unless submitted electronically. Illegibility or ambiguity therein may constitute justification for rejection of the Bid.
- 02.04 Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor's License Number of the Bidder (if work requires contractor's license), and the Project name and number for which the Bid is submitted, along with the Bid number.
- 02.05 The price quoted for the Work shall be stated in words and figures on the Bid Form, and in numbers only on the Unit Price Form. The price in the Proposal shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.
- 02.06 The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).
- 02.07 Only the Contractors licensed by the State to do the type of Work involved can submit a Proposal for the Work. The envelope containing the Proposal shall have the Contractor's license number on it. Failure to be properly licensed constitutes authority by the Owner for rejection of Bid.
- 02.08 Bidders shall not attach any conditions or provisions to the Proposal. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid or Proposal.
- 02.09 A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish

of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide, or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.

- 02.10 Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids as permitted by Public Bid Law. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the Execution of the Contract.
- 02.11 A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened.
- 02.12 Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
- 02.13 No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. No inquiry received within seven (7) days prior to the day fixed for opening of the Bids shall be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O)(2)(a) and (b).
- 02.14 The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.
- 02.15 The Contractor shall indemnify and hold harmless the Owner from any and all suits, costs, penalties or claims for infringement by reason of use or installation of any patented design, device, material or process, or any trademark and copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify and hold harmless the Owner for any costs, expenses and damages which it may be obliged to pay by reason of any such infringement at any time during the prosecution or after completion of the Work.
- 02.16 Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
- 02.17 Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this

Contract. Bidder shall also thoroughly examine and be familiar with drawings, Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form instrument, Drawing or document or to visit the site and acquaint itself with existing conditions, shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.

- 02.18 The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
- 02.19 When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or into conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
- 02.20 Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
- 02.21 Sealed Proposals (Bid) shall be received by St. Tammany Parish Government at the office of St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, until the time and date denoted in Notice to Bidders, at which time and place the Proposals (Bids), shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38-2212(A)(3)(c)(i), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Proposals (Bids) may also be mailed by certified mail to St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders.
- 02.22 Proposals (Bids) shall be executed on Forms furnished and placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these General Conditions, and addressed:

St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471

- 02.23 See Notice to Bidders for availability of Drawings, Specifications and Contract Documents via electronic methods.
- 02.24 The successful Bidder shall be required to post in each direction a public information sign, 4' x 4' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.

03.00 AWARD, EXECUTION OF DOCUMENTS, BONDS, ETC.

- 03.01 The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility, qualifications and financial ability and stability of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. The Owner reserves the right to reject the Bid of any Bidder in accordance with the Public Bid Law, LSA-R.S. 38:2214. If the Contract is awarded, the Owner shall give

the successful Bidder written notice of the award within forty-five (45) calendar days after the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.

- 03.02 At least three counterparts of the Agreement and of such other Contract Documents as practicable shall be signed by the Owner and the Contractor. The Owner shall identify those portions of the Contract Documents not so signed and such identification shall be binding on both parties. The Owner and the Contractor shall each receive an executed counterpart of the Contract Documents.
- 03.03 Prior to the execution of the Agreement, the Contractor shall deliver to the Owner the required Bonds.
- 03.04 Failure of the successful Bidder to execute the Agreement and deliver the required Bonds within twenty (20) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited.
- 03.05 In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and save harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a surety Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
- 03.06 No surety Company will be accepted as a bondsman who has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Services of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
- 03.07 In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):

Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.

- 03.08 Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent, bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time Contractor learns or has reason to know that the original surety is no longer financially

viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due or to become due Contractor.

- 03.09 The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
- 03.10 The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans and Specifications. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
- 03.11 The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of Section 03.00.
- 03.12 The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of this Contract by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
- 03.13 Contractor shall pay for the cost of recording the Contract and Bond and the cost of canceling same. Contractor shall also secure and pay for all Clear Lien and Privilege Certificates (together with any updates) which will be required before any final payment is made, and that may be required before any payment, at the request of the Owner, its representative, agent, architect, engineer and the like. All recordation and Clear Lien and Privilege Certificate requirements shall be in accordance with those requirements noted herein before in contract Specifications.

04.00 SUBCONTRACTS

- 04.01 Contractor shall be fully responsible for all acts and omissions of its Subcontractors and of persons and organizations for whose acts any of them may be liable to the same extent that it is responsible for the acts and omissions of persons directly employed by it. Nothing in the Contract Documents shall create any contractual relationship between Owner and any Subcontractor or other person or organization having a direct Contract with Contractor, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any monies due any Subcontractor.
- 04.02 Nothing in the Contract Documents shall be construed to control the Contractor in dividing the Work among approved Subcontractors or delineating the Work to be performed by any trade.
- 04.03 The Contractor agrees to specifically bind every Subcontractor to all of the applicable terms and conditions of the Contract Documents prior to commencing Work. Every Subcontractor, by undertaking to perform any of the Work, shall thereby automatically be deemed bound by such terms and conditions.
- 04.04 The Contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses including Attorney's fees arising out of or resulting from the Contractor's failure to bind every Subcontractor and Contractor's surety to all of the applicable terms and conditions of the Contract Documents.

05.00 ASSIGNMENT

05.01 Neither party to this Contract shall assign or sublet its interest in this Contract without prior written consent of the other, nor shall the Contractor assign any monies due or to become due to it under this Contract without previous written consent of the Owner, nor without the consent of the surety unless the surety has waived its right to notice of assignment.

06.00 CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS.

06.01 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between Owner and Contractor. Alterations, modifications and amendments shall only be in writing between these parties.

06.02 The Contract Documents are intended to be complimentary and to be read *in pari materii*, and what is called for by one is as binding as if called for by all. If Contractor finds a conflict, error or discrepancy in the Contract Documents, it shall call it to the Owner's attention, in writing, at once and before proceeding with the Work affected thereby; however, it shall be liable to Owner for its failure to discover any conflict, error or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, General Conditions, Construction Specifications and Drawings. The general notes on the plans shall be considered special provisions. Figure dimensions on Drawings shall govern over scale dimensions and detail Drawings shall govern over general Drawings. Where sewer connections are shown to fall on a lot line between two lots, the Contractor shall determine this location by measurement not by scale. Any Work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described herein which so applied to this Project are covered by a well-known technical meaning or specification shall be deemed to be governed by such recognized standards unless specifically excluded.

06.03 Unless otherwise provided in the Contract Documents, the Owner will furnish to the Contractor (free of charge not to exceed ten (10) copies) Drawings and Specifications for the execution of Work. The Drawings and Specifications are the property of the Owner and are to be returned to it when the purpose for which they are intended have been served. The Contractor shall keep one copy of all Drawings and Specifications, including revisions, Addenda, details, Shop Drawings, etc. on the Work in good order and available to the Owner or the regulatory agency of the governmental body having jurisdiction in the area of the Work.

07.00 SHOP DRAWINGS, BROCHURES AND SAMPLES

07.01 After checking and verifying all field measurements, Contractor shall submit to Owner for approval, five copies (or at Owner's option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of Contractor and identified as Owner may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable Owner to review the information as required.

07.02 Contractor shall also submit to Owner, for review with such promptness as to cause no delay in Work, all samples as required by the Contract Documents. All samples will have been checked by and stamped with the approval of Contractor identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended. At the time of each submission, Contractor shall in writing call Owner's attention to any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.

07.03 Owner will review with reasonable promptness Shop Drawings and samples, but its review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor

shall make any corrections required by Owner and shall return the required number of corrected copies of Shop Drawings and resubmit new samples for review. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Owner on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner that Contractor has determined and verified all quantities, dimensions, field construction criteria, materials catalog numbers and similar data and thereafter assumes full responsibility for doing so, and that it has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

07.04 Where a Shop Drawing or sample submission is required by the Specifications, no related Work shall be commenced until the submission has been reviewed by Owner. A copy of each reviewed shop Drawing and each inspected sample shall be kept in good order by Contractor at the site and shall be available to Owner.

07.05 Owner's review of Shop Drawings or samples shall not relieve Contractor from its responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called Owner's attention to such deviation at the time of submission and Owner has given written approval to the specific deviation, nor shall any review by Owner relieve Contractor from responsibility for errors or omissions in the Shop Drawings. The mere submittal of shop drawings which contain deviations from the requirements of plans, specifications and/or previous submittals in itself does not satisfy this requirement.

08.00 RECORD DRAWINGS

08.01 The Contractor shall keep an accurate record in a manner approved by the Owner of all changes in the Contract Documents during construction. In Work concerning underground utilities, the Contractor shall keep an accurate record in a manner approved by the Owner of all valves, fittings, etc. Before the Work is accepted by the Owner, and said acceptance is recorded, the Contractor shall furnish the Owner a copy of this record.

08.02 Contractor shall keep an accurate drawing measured in the field to the nearest 0.1' of the location of all sewer house connections. The location shown shall be the end of the connection at the property line measured along the main line of pipe from a manhole.

08.03 Contractor shall keep an accurate drawing of the storm water drainage collection system. Inverts to the nearest 0.01' and top of castings shall be shown as well as location of all structures to the nearest 0.1'. Upon completion of the Work, the plan will be given to the Owner.

09.00 PROGRESS OF WORK

09.01 Contractor shall conduct the Work in such a professional manner and with sufficient materials, equipment and labor as is considered necessary to ensure its completion within the time limit specified.

09.02 The Owner shall issue a Notice to Proceed to the Contractor within twenty (20) calendar days from the date of execution of the Contract. Upon mutual consent by both parties, the Notice to Proceed may be extended. The Contractor is to commence Work under the Contract within ten (10) calendar days from the date the Notice to Proceed is issued by the Owner.

09.03 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's approval an estimated progress schedule for the work to be performed, as well as a construction signing layout for all roads within the project area. The Contractor shall not start work or request partial payment until the work schedule has been submitted to the Owner for approval.

09.04 Revisions to the original schedule will be made based on extension of days granted for inclement weather or change orders issued under the contract. No other revision shall be made which affects the original completion or updated completion date, whichever is applicable.

09.05 Failure of the Contractor to submit an estimated progress schedule or to complete timely and on schedule the Work shown on the progress schedule negates any and all causes or claims by the Contractor for accelerated completion damages. These accelerated damage claims shall be deemed forfeited.

09.06 Meetings will be held as often as necessary to expedite the progress of the job. Meetings will be held during normal working hours at the jobsite and shall be mandatory for the Contractor and all Sub-Contractors working on the project. Meetings may be requested by the Owner at any time and at the discretion of the Owner.

10.00 OWNER'S RIGHT TO PROCEED WITH PORTIONS OF THE WORK

10.01 Upon failure of the Contractor to comply with any notice given in accordance with the provisions hereof, the Owner shall have the alternative right, instead of assuming charge of the entire Work, to place additional forces, tools, equipment and materials on parts of the Work. The cost incurred by the Owner in carrying on such parts of the Work shall be payable by the Contractor. Such Work shall be deemed to be carried on by the Owner on account of the Contractor. The Owner may retain all amounts of the cost of such Work from any sum due Contractor or those funds that may become due to Contractor under this Agreement.

10.02 Owner may perform additional Work related to the Project by itself or it may let any other direct contract which may contain similar General Conditions. Contractor shall afford the other contractors who are parties to such different contracts (or Owner, if it is performing the additional Work itself) reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work, and shall properly connect and coordinate its Work with the subsequent work.

10.03 If any part of Contractor's Work depends upon proper execution or results upon the Work of any such other contractor (or Owner), Contractor shall inspect and promptly report to Owner in writing any defects or deficiencies in such Work that render it unsuitable for such proper execution and results. Failure to so report shall constitute an acceptance of the other Work as fit and proper for the relationship of its Work except as to defects and deficiencies which may appear in the other Work after the execution of its Work.

10.04 Whatever Work is being done by the Owner, other Contractors or by this Contractor, the parties shall respect the various interests of the other parties at all times. The Owner may, at its sole discretion, establish additional rules and regulations concerning such orderly respect of the rights of various interests.

10.05 Contractor shall do all cutting, fitting and patching of its Work that may be required to integrate its several parts properly and fit to receive or be received by such other Work. Contractor shall not endanger any Work of others by cutting, excavating or otherwise altering Work and will only alter Work with the written consent of Owner and of the other contractors whose Work will be affected.

10.06 If the performance of additional Work by other contractors or Owner is not noted in the Contract Documents, written notice thereof shall be given to Contractor prior to starting any such additional Work. If Contractor believes that the performance of such additional Work by Owner or others may cause additional expense or entitles an extension of the Contract Time, the Contractor may make a claim therefor. The claim must be in writing to the Owner within thirty (30) calendar days of receipt of notice from the Owner of the planned additional Work by others.

11.00 TIME OF COMPLETION

11.01 The Notice to Proceed will stipulate the date on which the Contractor shall begin work. That date shall be the beginning of the Contract Time charges.

11.02 Contractor shall notify the Owner through its duly authorized representative, in advance, of where Contractor's work shall commence each day. A daily log shall be maintained by Contractor to establish dates, times, persons contacted, and location of work. Specific

notice shall be made to the Owner if the Contractor plans to work on Saturday, Sunday, or a Parish approved holiday. If notice is not received, no consideration will be given for inclement weather and same shall be considered a valid work day.

- 11.03 The Work covered by the Plans, Specifications and Contract Documents must be completed sufficiently for acceptance within the number of calendar days specified in the Proposal and/or the Contract, commencing from the date specified in the Notice to Proceed. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the time of completion is an essential condition of this Contract, and it is further mutually understood and agreed that if the Contractor shall neglect, fail or refuse to complete the Work within the time specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as partial consideration for the awarding of this Contract, to pay the Owner based on **Table 3.1** as specified in the Contract, not as a penalty, but as liquidated damages for such breach of contract for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work. It is specifically understood that the Owner shall also be entitled to receive a reasonable attorney fee and all costs in the event that Contractor fails to adhere to this agreement and this contract is referred to counsel for any reason whatsoever. Reasonable attorney fees shall be the prevailing hourly rate of the private sector, and in no event shall the hourly rate be less than \$175.00 per hour. All attorney fees shall be paid to the operating budget of the Office of the Parish President.
- 11.04 Prior to final payment, the Contractor may, in writing to the Owner, certify that the entire Project is substantially complete and request that the Owner or its agent issue a certificate of Substantial Completion. See Section 29.00.
- 11.05 The Owner may grant an extension(s) of time to the Contractor for unusual circumstances which are beyond the control of the Contractor and could not reasonably be foreseen by the Contractor prior to Bidding. Any such request must be made in writing to the Owner within seven (7) calendar days following the event occasioning the delay. The Owner shall have the exclusive and unilateral authority to determine, grant, and/or deny the validity of any such claim.
- 11.06 Extensions of time for inclement weather shall be processed as follows:

Commencing on the start date of each job, the Parish Inspector assigned to same shall keep a weekly log, indicating on each day whether inclement weather has prohibited the Contractor from working on any project within the specific job, based upon the following:

1. Should the Contractor prepare to begin work on any day in which inclement weather, or the conditions resulting from the weather, prevent work from beginning at the usual starting time, and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for work.
2. If weather conditions on the previous day prevent Contractor from performing work scheduled, provided that no other work can be performed on any project within the package. The Parish Inspector shall determine if it is financially reasonable to require the Contractor to deviate from the schedule and relocate to another location.
3. If the Contractor is unable to work at least 60% of the normal work day due to inclement weather, provided that a normal working force is engaged on the job.

Any dispute of weather conditions as related to a specific job shall be settled by records of the National Weather Service.

- 11.07 Extensions of time for change orders

When a change order is issued, the Owner and Contractor will agree on a reasonable time extension, if any, to implement such change. Consideration shall be given for, but not limited to, the following:

1. If material has to be ordered;
2. Remobilization and or relocation of equipment to perform task; and
3. Reasonable time frame to complete additional work.

Time extensions for change orders shall be reflected on the official document signed by the Owner and Contractor.

11.08 At the end of each month, the Owner or its agent will furnish to the Contractor a monthly statement which reflects the number of approved days added to the contract. The Contractor will be allowed fourteen (14) calendar days in which to file a written protest setting forth in what respect the monthly statement is incorrect; otherwise, the statement shall be considered accepted by the Contractor as correct.

11.09 Apart from extension of time for unavoidable delays, no payment or allowance of any kind shall be made to the Contractor as compensation for damages because of hindrance or delay for any cause in the progress of the Work, whether such delay be avoidable or unavoidable.

12.00 LIQUIDATED DAMAGES

12.01 In case the Work is not completed in every respect within the time that may be extended, it is understood and agreed that per diem deductions per **Table 3.1** for liquidated damages, as stipulated in the Proposal and/or Contract, shall be made from the total Contract Price for each and every calendar day after and exclusive of the day on which completion was required, and up to the completion of the Work and acceptance thereof by the Owner. It is understood and agreed that time is of the essence to this Contract, and the above sum being specifically herein agreed upon in advance as the measure of damages to the Owner on account of such delay in the completion of the Work. It is further agreed that the expiration of the term herein assigned or as may be extended for performing the Work shall, *ipso facto*, constitute a putting in default, the Contractor hereby waiving any and all notice of default. The Contractor agrees and consents that the Contract Price, reduced by the aggregate of the entire damages so deducted, shall be accepted in full satisfaction of all Work executed under this Contract. It is further understood and agreed that Contractor shall be liable for a reasonable attorney fee and all costs associated with any breach of this agreement, including but not limited to this subsection. In the event that any dispute or breach herein causes referrals to counsel, then Contractor agrees to pay a reasonable attorney fee at the prevailing hourly rate of the private sector. In no event shall the hourly rate be less than \$175.00 per hour.

13.00 LABOR, MATERIALS, EQUIPMENT, SUPERVISION, PERMITS AND TAXES

13.01 The Contractor shall provide and pay for all labor, materials, equipment, supervision, subcontracting, transportation, tools, fuel, power, water, sanitary facilities and all incidentals necessary for the completion of the Work in substantial conformance with the Contract Documents.

13.02 The Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. It shall at all times maintain good discipline and order at the site.

13.03 Unless otherwise specifically provided for in the Specifications, all workmanship, equipment, materials, and articles incorporated in the Work covered by this Contract are to be new and of the best grade of their respective kinds for the purpose intended. Samples of materials furnished under this Contract shall be submitted for approval to the Owner when and as directed.

13.04 Whenever a material or article required is specified or shown on the plans by using the name of a proprietary product or of a particular manufacturer or Contractor, any material or article which shall perform adequately the duties imposed by the general design will be considered equal, and satisfactory, providing the material or article so proposed is of equal substance and function and that all technical data concerning the proposed substitution be approved by the Owner prior to the Bidding. The Owner shall have the exclusive and

unilateral discretion to determine quality and suitability in accordance with LSA-R.S. 38:2212(T)(2).

- 13.05 Materials shall be properly and securely stored so as to ensure the preservation of quality and fitness for the Work, and in a manner that leaves the material accessible to inspection. Materials or equipment may not be stored on the site in a manner such that it will interfere with the continued operation of streets and driveways or other contractors working on the site.
- 13.06 The Contractor, by entering into the Contract for this Work, sets itself forth as an expert in the field of construction and it shall supervise and direct the Work efficiently and with its best skill and attention. It shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.
- 13.07 Contractor shall keep on the Work, at all times during its progress, a competent resident Superintendent, who shall not be replaced without written Notice to Owner except under extraordinary circumstances. The Superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor. Owner specifically reserves the right to approve and/or disapprove the retention of a new superintendent, all to not be unreasonably withheld.
- 13.08 Any foreman or workman employed on this Project who disregards orders or instructions, does not perform his Work in a proper and skillful manner, or is otherwise objectionable, shall, at the written request of the Owner, be removed from the Work and shall be replaced by a suitable foreman or workman.
- 13.09 The Contractor and/or its assigned representative shall personally ensure that all subcontracts and divisions of the Work are executed in a proper and workmanlike manner, on scheduled time, and with due and proper cooperation.
- 13.10 Failure of the Contractor to keep the necessary qualified personnel on the Work shall be considered cause for termination of the Contract by the Owner.
- 13.11 Only equipment in good working order and suitable for the type of Work involved shall be brought onto the job and used by the Contractor. The Contractor is solely responsible for the proper maintenance and use of its equipment and shall hold the Owner harmless from any damages or suits for damages arising out of the improper selection or use of equipment. No piece of equipment necessary for the completion of the Work shall be removed from the job site without approval of the Owner.
- 13.12 All Federal, State and local taxes due or payable during the time of Contract on materials, equipment, labor or transportation, in connection with this Work, must be included in the amount bid by the Contractor and shall be paid to proper authorities before acceptance. The Contractor shall furnish all necessary permits and certificates and comply with all laws and ordinances applicable to the locality of the Work. The cost of all inspection fees levied by any governmental entity whatsoever shall be paid for by the Contractor.
- 13.13 In accordance with St. Tammany Police Jury Resolution 86-2672, as amended, the Contractor must provide in a form suitable to the Owner an affidavit stating that all applicable sales taxes for materials used on this project have been paid.
- 13.14 During the period that this Contract is in force, neither party to the Contract shall solicit for employment or employ an employee of the other.
- 13.15 All materials or equipment shown on the Drawings or included in these specifications shall be furnished unless written approval of a substitute is obtained from the Designer, or Owner if no separate designer.
- 13.16 If a potential supplier wishes to submit for prior approval a particular product other than a product specified in the contract documents, he shall do so no later than fourteen working days prior to the opening of bids. Within ten days, exclusive of holidays and weekends, after such submission, the prime design professional shall furnish to both the public entity and the potential supplier written approval or denial of the product submitted. The burden

of proof of the equality of the proposed substitute is upon the proposer and only that information formally submitted shall be used by the Designer in making its decision.

13.17 The decision of the Designer/Owner shall be given in good faith and shall be final.

14.00 QUANTITIES OF ESTIMATE, CHANGES IN QUANTITIES, EXTRA WORK

14.01 Whenever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents, including the Proposal, such are given for use in comparing Bids and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish same not to exceed twenty-five percent (25%) by the Owner to complete the Work contemplated by this Contract. Such increase or diminution shall in no way vitiate this Contract, nor shall such increase or diminution give cause for claims or liability for damages.

14.02 The Owner shall have the right to make alterations in the line, grade, plans, form or dimensions of the Work herein contemplated, provided such alterations do not change the total cost of the Project, based on the originally estimated quantities, and the unit prices bid by more than twenty-five percent (25%) and provided further that such alterations do not change the total cost of any major item, based on the originally estimated quantities and the unit price bid by more than twenty-five (25%). (A major item shall be construed to be any item, the total cost of which is equal to or greater than ten percent (10%) of the total Contract Price, computed on the basis of the Proposal quantity and the Contract unit price). Should it become necessary, for the best interest of the Owner, to make changes in excess of that herein specified, the same shall be covered by supplemental agreement either before or after the commencement of the Work and without notice to the sureties. If such alterations diminish the quantity of Work to be done, such shall not constitute a claim for damages for anticipated profits for the Work dispensed with, but when the reduction in amount is a material part of the Work contemplated, the Contractor shall be entitled to only reasonable compensation as determined by the Owner for overhead and equipment charges which it may have incurred in expectation of the quantity of Work originally estimated, unless specifically otherwise provided herein; if the alterations increase the amount of Work, the increase shall be paid according to the quantity of Work actually done and at the price established for such Work under this Contract except where, in the opinion of the Owner, the Contractor is clearly entitled to extra compensation.

14.03 Without invalidating the Contract, the Owner may order Extra Work or make changes by altering, adding to, or deducting from the Work, the Contract sum being adjusted accordingly. The consent of the surety must first be obtained when necessary or desirable, all at the exclusive discretion of the Owner. All the Work of the kind bid upon shall be paid for at the price stipulated in the Proposal, and no claims for any Extra Work or material shall be allowed unless the Work is ordered in writing by the Owner.

14.04 Extra Work for which there is no price or quantity included in the Contract shall be paid for at a unit price or lump sum to be agreed upon in advance in writing by the Owner and Contractor. Where such price and sum cannot be agreed upon by both parties, or where this method of payment is impracticable, the Owner may, at its exclusive and unilateral discretion, order the Contractor to do such Work on a Force Account Basis.

14.05 In computing the price of Extra Work on a Force Account Basis, the Contractor shall be paid for all foremen and labor actually engaged on the specific Work at the current local rate of wage for each and every hour that said foremen and labor are engaged in such Work, plus ten percent (10%) of the total for superintendence, use of tools, overhead, direct & indirect costs/expenses, pro-rata applicable payroll taxes, pro-rata applicable workman compensation benefits, pro-rata insurance premiums and pro-rata reasonable profit. The Contractor shall furnish satisfactory evidence of the rate or rates of such insurance and tax. The Contractor will not be able to collect any contribution to any retirement plans or programs.

14.06 For all material used, the Contractor shall receive the actual cost of such material delivered at the site of the Work, as shown by original receipted bill, to which shall be added five percent (5%). There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.

- 14.07 For any equipment used that is owned by the Contractor, the Contractor shall be allowed a rental based upon the latest prevailing rental price, but not to exceed a rental price as determined by the Associated Equipment Distributors (A.E.D. Green Book).
- 14.08 The Contractor shall also be paid the actual costs of transportation for any equipment which it owns and which it has to transport to the Project for the Extra Work. There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.
- 14.09 If the Contractor is required to rent equipment for Extra Work, but not required for Contract items, it will be paid the actual cost of rental and transportation of such equipment to which no percent shall be added. The basis upon which rental cost are to be charged shall be agreed upon in writing before the Work is started. Actual rental and transportation costs shall be obtained from receipted invoices and freight bills.
- 14.10 No compensation for expenses, fees or costs incurred in executing Extra Work, other than herein specifically mentioned herein above, will be allowed.
- 14.11 A record of Extra Work on Force Account basis shall be submitted to the Owner on the day following the execution of the Work, and no less than three copies of such record shall be made on suitable forms and signed by both the Owner or his representative on the Project and the Contractor. All bids for materials used on extra Work shall be submitted to the Owner by the Contractor upon certified statements to which will be attached original bills covering the costs of such materials.
- 14.12 Payment for Extra Work of any kind will not be allowed unless the same has been ordered in writing by the Owner.

15.00 STATUS OF THE ENGINEER (NOT APPLICABLE)

16.00 INJURIES TO PERSONS AND PROPERTY

- 16.01 The Contractor shall be held solely and exclusively responsible for all injuries to persons and for all damages to the property of the Owner or others caused by or resulting from the negligence of itself, its employees or its agents, during the progress of or in connection with the Work, whether within the limits of the Work or elsewhere under the Contract proper or as Extra Work. This requirement will apply continuously and not be limited to normal working hours or days. The Owner's construction review is for the purpose of checking the Work product produced and does not include review of the methods employed by the Contractor or to the Contractor's compliance with safety measures of any nature whatsoever. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.
- 16.02 The Contractor must protect and support all utility infrastructures or other properties which are liable to be damaged during the execution of its Work. It shall take all reasonable and proper precautions to protect persons, animals and vehicles or the public from the injury, and wherever necessary, shall erect and maintain a fence or railing around any excavation, and place a sufficient number of lights about the Work and keep same burning from twilight until sunrise, and shall employ one or more watchmen as an additional security whenever needed. The Contractor understands and agrees that the Owner may request that security be placed on the premises to ensure and secure same. The Owner shall have exclusive authority to request placement of such security. Contractor agrees to retain and place security as requested, all at the sole expense of Contractor. Additional security shall not be considered a change order or reason for additional payment by the Owner. The Contractor must, as far as practicable and consistent with good construction, permit access to private and public property and leave fire hydrants, catch basins, streets, etc., free from encumbrances. The Contractor must restore at its own expense all injured or damaged property caused by any negligent act of omission or commission on its part or on the part of its employees or subcontractors, including, but not limited to, sidewalks, curbing, sodding, pipes conduits, sewers, buildings, fences, bridges, retaining walls, tanks, power lines, levees or any other

building or property whatsoever to a like condition as existed prior to such damage or injury.

- 16.03 In case of failure on the part of the Contractor to restore such property or make good such damage, the Owner may upon forty-eight (48) hours' notice proceed to repair or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due or which may become due under its Contract.
- 16.04 Contractor agrees to protect, defend, indemnify, save, and hold harmless St. Tammany Parish Government, its elected and appointed officials, departments, agencies, boards and commissions, their officers, agents servants, employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property to the extent caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors, or any and all costs, expense and/or attorney fees incurred by St. Tammany Parish Government as a result of any claim, demands, and/or causes of action that results from the negligent performance or non-performance by Contractor, its agents, servants, employees, and subcontractors of this contract. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors.
- 16.05 As to any and all claims against Owner, its agents, assigns, representatives or employees by any employee of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts as may be liable, the indemnification obligation under Paragraph 16.04 shall not be limited in any way or by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 16.06 No road shall be closed by the Contractor to the public except by written permission of the Owner. If so closed, the Contractor shall maintain traffic over, through and around the Work included in his Contract, with the maximum practical convenience, for the full twenty-four hours of each day of the Contract, whether or not Work has ceased temporarily. The Contractor shall notify the Owner at the earliest possible date after the Contract has been executed and, in any case, before commencement of any construction that might in any way inconvenience or endanger traffic, in order that necessary and suitable arrangements may be determined. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.07 The convenience of the general public and residents along the Works shall be provided for in a reasonable, adequate and satisfactory manner. Where existing roads are not available as detours, and unless otherwise provided, all traffic shall be permitted to pass through the Work. In all such cases, the public shall have precedence over Contractor's vehicles insofar as the traveling public's vehicles shall not be unduly delayed for the convenience of the Contractor. In order that all unnecessary delay to the traveling public may be avoided, the Contractor shall provide and station competent flagmen whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the Work. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.08 The Contractor shall arrange its Work so that no undue or prolonged blocking of business establishments will occur.
- 16.09 Material and equipment stored on the right of way or work site shall be so placed and the Work at times shall be so conducted as to ensure minimum danger and obstruction to the traveling public.

- 16.10 During grading operations when traffic is being permitted to pass through construction, the Contractor shall provide a smooth, even surface that will provide a satisfactory passageway for use of traffic. The road bed shall be sprinkled with water if necessary to prevent a dust nuisance, provided the dust nuisance is a result of the Work.
- 16.11 Fire hydrants shall be accessible at all times to the Fire Department. No material or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules or regulations or within fifteen (15) feet of a fire hydrant, in the absence of such ordinance, rules or regulations.
- 16.12 The Contractor shall not, without the written permission of the Owner, do Work for a resident or property owner abutting the Work at the time that this Work is in progress.
- 16.13 No Work of any character shall be commenced on railroad right-of-way until the Railroad Company has issued a permit to the Owner and has been duly notified by the Contractor in writing (with a copy forwarded to the Owner) of the date it proposes to begin Work, and until an authorized representative of the Railroad Company is present, unless the Railroad Company waives such requirements. All Work performed by the Contractor within the right-of-way limits of the railroad shall be subject to the inspection and approval of the chief engineer of the Railroad Company or its authorized representative. Any precautions considered necessary by said chief engineer to safeguard the property, equipment, employees and passengers of the Railroad Company shall be taken by the Contractor without extra compensation. The Contractor shall, without extra compensation, take such precautions and erect and maintain such tell-tale or warning devices as the Railroad Company considers necessary to safeguard the operation of its trains. The temporary vertical and horizontal clearance specified by the chief engineer of the Railroad Company in approving these shall be maintained at all times. No steel, brick, pipe or any loose material shall be left on the ground in the immediate vicinity of the railway track. Before any Work is done within Railroad right of way, the Contractor shall provide and pay all costs of any special insurance requirements of the Railroad.
- 16.14 The Contractor, shall, without extra compensation, provide, erect, paint and maintain all necessary barricades. Also, without extra compensation, the Contractor shall provide suitable and sufficient lights, torches, reflectors or other warning or danger signals and signs, provide a sufficient number of watchmen and flagmen and take all the necessary precautions for the protection of the Work and safety of the Public.
- 16.15 The Contractor shall erect warning signs beyond the limits of the Project, in advance of any place on the Project where operations interfere with the use of the road by traffic, including all intermediate points where the new Work crosses or coincides with the existing road. All barricades and obstructions shall be kept well painted and suitable warning signs shall be placed thereon. All barricades and obstructions shall be illuminated at night and all lights or devices for this purpose shall be kept burning from sunset to sunrise.
- 16.16 Whenever traffic is maintained through or over any part of the Project, the Contractor shall clearly mark all traffic hazards. No direct payment will be made for barricades, signs and illumination therefore or for watchmen or flagmen.
- 16.17 The Contractor will be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. The duty of the Owner to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, or near the construction site.
- 17.00 SANITARY PROVISIONS
- 17.01 The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the rules and regulations of the State Health Agency or of the other authorities having jurisdiction and shall permit no public nuisance.

18.00 RIGHTS OF WAY

- 18.01 The Owner will furnish the Contractor with all necessary rights-of-way for the prosecution of the Work. The rights of way herein referred to shall be taken to mean only permission to use or pass through the locations or space in any street, highway, public or private property in which the Contractor is to prosecute the Work.
- 18.02 It is possible that all lands and rights of way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin its Work upon such land and rights of way as the Owner may have previously acquired. Any delay in furnishing these lands by the Owner can be deemed proper cause for adjustment in the Contract amount and/or in the time of completion.

19.00 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

- 19.01 The Contractor shall not enter upon private property for any purpose without first obtaining permission from the Owner, as well as the private property owner and/or and private property Lessees. The Contractor shall use every precaution necessary for the preservation of all public and private property, monuments, highway signs, telephone lines, other utilities, etc., along and adjacent to the Work; the Contractor shall use every precaution necessary to prevent damage to pipes, conduits, and other underground structures; and shall protect carefully from disturbance or damage all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed. The street and highway signs and markers that are to be affected by the Work shall be carefully removed when the Work begins and stored in a manner to keep them clean and dry. The Contractor must obtain all necessary information in regard to existing utilities and shall give notice in writing to the owners or the proper authorities in charge of streets, gas, water, pipes, electric, sewers and other underground structures, including conduits, railways, poles and pole lines, manholes, catch basins, fixtures, appurtenances, and all other property that may be affected by the Contractor's operations, at least forty-eight (48) hours before its operations will affect such property. The Contractor shall not hinder or interfere with any person in the protection of such Work or with the operation of utilities at any time. When property, the operation of railways, or other public utilities are endangered, the Contractor shall at its own expense, maintain flagmen or watchmen and any other necessary precautions to avoid interruption of service or damage to life or property, and it shall promptly repair, restore, or make good any injury or damage caused by its negligent operations in an acceptable manner. The Contractor must also obtain all necessary information in regard to the installation of new cables, conduits, and transformers, and make proper provisions and give proper notifications, in order that same can be installed at the proper time without delay to the Contractor or unnecessary inconvenience to the Owner.
- 19.02 The Contractor shall not remove, cut or destroy trees, shrubs, plants, or grass that are to remain in the streets or those which are privately owned, without the proper authority. Unless otherwise provided in the Special Provisions or the Proposal, the Contractor shall replace and replant all plants, shrubs, grass and restore the grounds back to its original good condition to the satisfaction of the Owner and/or the property owner. The Contractor shall assume the responsibility of replanting and guarantees that plants, shrubs, grass will be watered, fertilized and cultivated until they are in a growing condition. No direct payment will be made for removing and replanting of trees, shrubs, plants or grass unless such items are set forth in the Proposal.
- 19.03 When or where direct damage or injury is done to public or private property by or on account of any negligent act, omission, neglect or otherwise of the Contractor, it shall make good such damage or injury in an acceptable manner.

20.00 CONTRACTORS RESPONSIBILITY FOR WORK

- 20.01 Until final acceptance of the Work by the Owner as evidence by approval of the final estimate, the Work shall be in the custody and under the charge and care of the Contractor and it shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from the non-execution of the Work; unless otherwise provided for elsewhere in the Specifications or Contract. The Contractor shall rebuild,

repair, restore and make good, without extra compensation, all injuries or damages to any portion of the Work occasioned by any of the above causes before its completion and acceptance, and shall bear the expenses thereof. In case of suspension of the Work from any cause whatever, the Contractor shall be responsible for all materials and shall properly and securely store same, and if necessary, shall provide suitable shelter from damage and shall erect temporary structures where necessary. If in the exclusive discretion of the Owner, any Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of its Subcontractors to so protect the Work, such materials shall be removed and replaced at the sole expense of the Contractor. Such amount shall be deducted from any sum due or to be due Contractor.

20.02 The Contractor shall give all notice and comply with all Federal, State, and local laws, ordinances, and regulations in any manner affecting the conduct of the Work, and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over the Work, and shall indemnify and hold harmless the Owner against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order or decree, whether by itself, its employees or Subcontractors.

21.00 TESTS AND INSPECTIONS CORRECTION & REMOVAL OF DEFECTIVE WORK

21.01 Contractor warrants and guarantees to Owner that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents. All unsatisfactory Work, all faulty or Defective Work and all Work not conforming to the requirements of the Contract Documents at the time of acceptance shall be considered Defective. Prompt and reasonable notice of all defects shall be given to the Contractor.

21.02 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested or approved by some public body, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish Owner the required certificates of inspection, testing or approval. All other inspections, tests and approval required by the Contract Documents shall be performed by organizations acceptable to Owner and Contractor and the costs thereof shall be borne by the Contractor unless otherwise specified.

21.03 Contractor shall give Owner timely notice of readiness of the Work for all inspections, tests or approvals. If any such Work required to be inspected, tested or approved is covered without written approval of Owner, it must, if requested by Owner, be uncovered for observation, and such uncovering shall be at Contractor's expense unless Contractor has given Owner timely notice of its intention to cover such Work and Owner has not acted with reasonable promptness in response to such notice.

21.04 Neither observations by Owner nor inspections, tests or approvals shall relieve Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Document.

21.05 Owner and its representatives will at reasonable times have access to the Work. Contractor shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.

21.06 If any Work is covered contrary to the written request of Owner, it must, be uncovered for Owner's observation and replaced at Contractor's expense. If any Work has been covered which Owner has not specifically requested to observe prior to its being covered, or if Owner considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at Owner's request, shall uncover, expose or otherwise make available for observations, inspections or testing as Owner may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

- 21.07 If the Work is Defective, or Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments to Subcontractors or for labor, materials or equipment, Owner may order Contractor to stop the Work, or any portion thereof, until the cause of such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.
- 21.08 Prior to approval of final payment, Contractor shall promptly, without cost to Owner and as specified by Owner, either correct any Defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not correct such Defective Work or remove and replace such rejected Work within a reasonable time, all as specified in a written notice from Owner, Owner may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement including compensation for additional professional services shall be paid by Contractor, and an appropriate deductive Change Order shall be issued. Contractor shall also bear the expense of making good all Work of others destroyed or damaged by its correction, removal or replacement of its Defective Work.
- 21.09 If, after the approval of final payment and prior to the expiration of one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be Defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such Defective Work or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, Owner may have the Defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by Contractor. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.
- 21.10 If, instead of requiring correction or removal and replacement of Defective Work, Owner (and prior to approval of final payment) prefers to accept it, the Owner may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price, or, if the acceptance occurs after approval of final payment, an appropriate amount shall be paid by Contractor to Owner.
- 21.11 If Contractor should fail to progress the Work in accordance with the Contract Documents, including any requirements of the Progress Schedule, Owner, after seven (7) days written Notice to Contractor, may, without prejudice to any other remedy Owner may have, make good such deficiencies and the cost thereof including compensation for additional professional services shall be charged against Contractor. In such cases, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to Owner.
- 21.12 The Owner may appoint representatives to make periodic visits to the site and observe the progress and quality of the executed Work. These representatives shall be governed by the same restrictions placed on the Owner by these Specifications. The governing body of the Federal, State or local government exercising authority in the area of the Work may appoint representatives to observe the progress and quality of the Work. Contractor shall cooperate with and assist these representatives in the performance of their duties.
- 21.13 The Contractor shall be responsible for the faithful execution of its Contract and the presence or absence of the Owner's or Government's Representative is in no way or manner to be presumed or assumed to relieve in any degree the responsibility or obligation of the Contractor.

- 21.14 The Contractor shall notify the Owner and the Governmental Agency having jurisdiction as to the exact time at which it is proposed to begin Work so the Owner may provide for inspection of all materials, foundations, excavations, equipment, etc., and all or any part of the Work and to the preparation or manufacture of materials to be used whether within the limits of the Work or at any other place.
- 21.15 The Owner or its representatives shall have free access to all parts of the Work and to all places where any part of the materials to be used are procured, manufactured or prepared. The Contractor shall furnish the Owner all information relating to the Work and the material therefor, which may be deemed necessary or pertinent, and with such samples of materials as may be required. The Contractor, at its own expense, shall supply such labor and assistance as may be necessary in the handling of materials for proper inspection or for inspection of any Work done by it.
- 21.16 No verbal instructions given to the Contractor by the Owner, Project Representative or any of their agents shall change or modify the written Contract. Contractors shall make no claims for additional payments or time based upon verbal instructions.

22.00 SUBSURFACE CONDITIONS

- 22.01 It is understood and agreed that the Contractor is familiar with the subsurface conditions that will be encountered and its price bid for the Work includes all of the costs involved for Work in these conditions and it is furthermore agreed that it has taken into consideration, prior to its Bid and acceptance by Owner, all of the subsurface conditions normal or unusual that might be encountered in the location of the Work.
- 22.02 Should the Contractor encounter during the progress of the Work subsurface conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, the attention of the Owner shall be directed to such conditions before the conditions are disturbed. If the Owner finds that the conditions materially differ from those shown on the Drawings or indicated in the Specifications, it shall at once make such changes in the Drawings or Specifications as it may find necessary, and any increase or decrease in cost or extension of time resulting from such changes shall be adjusted in the same manner as provided for changes for Extra Work. The Contractor shall submit breakdowns of all costs in a manner as instructed and approved by the Owner.

23.00 REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS

- 23.01 Bidder shall thoroughly examine the site of the Work and shall include in its Bid the cost of removing all structures and obstructions in the way of the Work.
- 23.02 The Contractor shall remove any existing structures or part of structures, fence, building or other encumbrances or obstructions that interfere in any way with the Work. Compensations for the removal of any structure shall be made only if the item(s) to be removed was/were listed as pay item(s) on the Proposal.
- 23.03 If called for in the Special Conditions, all privately and publicly owned materials and structures removed shall be salvaged without damage and shall be piled neatly and in an acceptable manner upon the premises if it belongs to an abutting property owner, otherwise at accessible points along the improvements. Materials in structures which is the property of the Owner or property of any public body, private body or individual which is fit for use elsewhere, shall remain property of the original Owner. It shall be carefully removed without damage, in sections which may be readily transported; same shall be stored on or beyond the right of way. The Contractor will be held responsible for the care and preservation for a period of ten (10) days following the day the last or final portion of the materials stored at a particular location are placed thereon. When privately owned materials are stored beyond the right of way, the Contractor will be held responsible for such care and preservation for a period of ten (10) days responsibility period for care and preservation of the materials begins. The Contractor must furnish the Owner with evidence satisfactory that the proper owner of the materials has been duly notified by the Contractor that the said owner must assume responsibility for its materials on the date following the Contractor's ten (10) day responsibility.

24.00 INSURANCE

- 24.01 Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
- 24.02 The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
- 24.03 Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
- 24.04 Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.
- 24.05 Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
- 24.06 Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, 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.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

24.07 The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract, include, but is not limited to:

1. Commercial General Liability insurance with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence/\$2,000,000 General Aggregate/Products-Completed Operations Per Project. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal Injury;
 - e) Broad form property damage;
 - f) Explosion and collapse.
2. 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.
3. Contractors' Pollution Liability and Environmental Liability insurance in the minimum amount of \$1,000,000 per occurrence, \$2,000,000 general aggregate and include coverage for full contractual liability and for all such environmental and/or hazardous waste exposures affected by this project.
4. Business Automobile Liability insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any automobiles;
 - b) Owned automobiles;
 - c) Hired automobiles;
 - d) Non-owned automobiles;
 - e) Uninsured motorist.
5. Workers' Compensation/Employers Liability insurance: worker's compensation insurance coverage and limits as statutorily required; Employers' Liability Coverage shall be not less than \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate, except when projects include exposures covered under the United States Longshoremen and Harbor Workers Act, Maritime and/or Jones Act and/or Maritime Employers Liability (MEL) limits shall be not less than \$1,000,000/\$1,000,000/\$1,000,000. *Coverage for owners, officers and/or partners shall be included in the policy and a statement of such shall be made by the insuring producer on the face of the certificate.*
6. Owners Protective Liability (OPL) (formerly Owners and Contractors Protective Liability (OCP) Insurance) shall be furnished by the Contractor naming St. Tammany Parish Government 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. Any project valued in excess of \$3,000,000 shall be set by the Office of Risk Management. The policy and all endorsements shall be addressed to St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434.
7. Builder's Risk Insurance shall be required on buildings, sewage treatment plants and drainage pumping stations, and shall be written on an "all-risk" or equivalent policy form in the amount of the full value of the initial Contract sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising 100% total value for the entire project including foundations. Deductibles should not exceed \$5,000 and Contractor shall be responsible for any

and all policy deductibles. This insurance shall cover portions of the work stored off the site, and also portions of the work in transit. In addition, Installation Floater Insurance, on an “all-risk” form, will be carried on all pumps, motors, machinery and equipment on the site or installed. Both the Builder’s Risk Insurance and the Installation Floater Insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors and shall terminate only when the Project has been accepted. St. Tammany Parish Government, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the Builder’s Risk and Installation Floater Insurance.

8. Professional Liability (errors and omissions) insurance in the sum of at least One Million Dollars (\$1,000,000) per claim with Two Million Dollars (\$2,000,000) annual aggregate.
 9. An umbrella policy or excess policy may be required and/or allowed to meet minimum coverage limits, subject to the review and approval by St. Tammany Parish Government, Office of Risk Management.
- 24.08 All policies of insurance shall meet the requirements of the Parish of St. Tammany prior to the commencing of any work. The Parish of St. Tammany 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 the Parish of St. Tammany as to form or substance; or if a company issuing any such policy shall be or become unsatisfactory to the Parish of St. Tammany, the Contractor shall promptly obtain a new policy, timely submit same to the Parish of St. Tammany for approval and submit a certificate thereof as provided above. The Parish agrees to not unreasonably withhold approval of any insurance carrier selected by Contractor. In the event that Parish cannot agree or otherwise authorize said carrier, Contractor shall have the option of selecting and submitting new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish 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.
- 24.09 Upon failure of Contractor to furnish, deliver and/or maintain such insurance as above provided, the contract, at the election of the Parish of St. Tammany, 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.
- 24.10 Contractor shall maintain a current copy of all annual insurance policies and provide same to the Parish of St. Tammany as may be reasonably requested.
- 24.11 It shall be the responsibility of Contractor to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Contractor. Contractor shall further ensure the Parish is named as additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project, and that renewal certificates for any policies expiring prior to the Parish’s final acceptance of the project shall be furnished to St. Tammany Parish Government, Department of Legal, Office of Risk Management, without prompting.

NOTICE:

These are only an indication of the coverages that are generally required. Additional coverages and/or limits may be required for projects identified as having additional risks or exposures. Please note that some requirements listed may not necessarily apply to your specific services. St. Tammany Parish Government reserves the right to remove, replace, make additions to and/or modify any and all of the insurance requirement language upon review of the final scope of services presented to Office of Risk Management prior to execution of a contract for services.

For inquiries regarding insurance requirements, please contact:

**St. Tammany Parish Government
Office of Risk Management
P. O. Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

24.12 Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's Responsibility for payment of damages resulting from its operations under this Contract.

25.00 OWNER'S RIGHT TO OCCUPANCY

25.01 The Owner shall have the right to use, at any time, any and all portions of the Work that have reached such a stage of completion as to permit such occupancy, provided such occupancy does not hamper the Contractor or prevent its efficient completion of the Contract or be construed as constituting an acceptance of any part of the Work.

25.02 The Owner shall have the right to start the construction of houses, structures or any other building concurrent with the Contractor's Work.

26.00 SURVEY HORIZONTAL AND VERTICAL CONTROL

26.01 The Owner shall provide surveys for construction to establish reference points which in its judgment are necessary to enable Contractor to layout and proceed with its Work. Contractor shall be responsible for surveying and laying out the Work and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of the Owner. Contractor shall report to Owner whenever any reference point is lost or destroyed and the Owner shall decide if the reference point shall be replaced by its or the Contractor's forces.

26.02 The Contractor shall establish lines and grades with its own forces in sufficient number and location for the proper execution of the Work.

26.03 If the Contractor, during the construction, damages the established property corners and/or other markers and thereafter requests the Owner to re-stake same in order to complete the project, this expense will be borne solely by the Contractor.

27.00 TERMINATION OF THE CONTRACT, OWNER'S AND CONTRACTORS RIGHT TO STOP WORK.

27.01 If the Contractor should be adjudged bankrupt (voluntarily or involuntarily) or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should persistently or repeatedly refuse or should fail (except in cases for which extension of time is provided) to supply enough properly skilled workmen or proper materials, or if it should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the Contract, then the Owner, upon the certificate of the Owner that, in its unilateral discretion and judgment, believes sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor ten (10) calendar days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the Work by whatever method the Owner may deem expedient.

27.02 Failure of the Contractor to start the Work within the time limit specified herein or substantial evidence that the progress being made by the Contractor is sufficient to complete the Work within the specified time shall be grounds for termination of the Contract by the Owner.

- 27.03 Before the Contract is terminated, the Contractor and its surety will first be notified in writing by the Owner of the conditions which make termination of the Contract imminent. When after ten (10) calendar days' notice is given and if satisfactory effort has not been made by the Contractor or its surety to correct the conditions, the Owner may declare, in its exclusive discretion, that the Contract is terminated and so notify the Contractor and its surety accordingly.
- 27.04 Upon receipt of notice from the Owner that the Contract has been terminated, the Contractor shall immediately discontinue all operations. The Owner may then proceed with the Work in any lawful manner that it may elect until Work is finally completed.
- 27.05 The exclusive right is reserved to the Owner to take possession of any machinery, implements, tools or materials of any description that shall be found upon the Work, to account for said equipment and materials, and to use same to complete the Project. When the Work is finally completed, the total cost of same will be computed. If the total cost is less than the Contract Price, the difference will not be paid to the Contractor or its surety.
- 27.06 In case of termination, all expenses incident to ascertaining and collecting losses under the Bond, including legal services, shall be assessed against the Bond.
- 27.07 If the Work should be stopped under any order of any court or public authority for period of sixty (60) calendar days, through no act or fault of the Contractor or anyone employed by it, or if the Owner shall fail to pay the Contractor within a reasonable time any sum certified by the Owner, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate this Contract and recover from the Owner payment for all Work properly and professionally executed in a workmanlike manner. This loss specifically includes actual cost of materials and equipment, together with all wages inclusive of all federal, state, and local tax obligations. This loss specifically includes reimbursement of all insurances on a pro-rata basis from the date of termination to date of policy period. This loss excludes and specifically does not include recovery by the Contractor for lost profit, indirect & direct expenses, overhead, and the like.

28.00 PAYMENTS TO THE CONTRACTOR

- 28.01 Monthly certificates for partial payment, in a form approved by the Owner, shall be transmitted to the Owner upon receipt from the Contractor and acceptance by the Owner. In accordance with LSA-R.S. 38:2248(A), when the Contract Price is less than five hundred thousand dollars, these certificates shall be equal to ninety percent (90%) of both the Work performed and materials stored at the site; and when the Contract Price is five hundred thousand dollars or more, these certificates shall be equal to ninety-five percent (95%) of both the Work performed and materials stored at the site. Partial payment certificates shall include only Work, materials and equipment that are included in official Work Order and which meet the requirements of plans, Specifications and Contract Documents. These monthly estimates shall show the amount of the original estimate for each item, the amount due on each item, the gross total, the retained percentage, the amount previously paid and the net amount of payment due.
- 28.02 After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is less than five hundred thousand dollars, the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety percent (90%) of the Contract Price. After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is five hundred thousand dollars or more, the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety-five percent (95%) of the Contract Price.
- 28.03 When the Contract Price is less than five hundred thousand dollars, the final payment certificate of the remaining ten percent (10%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. When the Contract Price is five hundred thousand dollars or more, the final payment certificate of the remaining five percent (5%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing

acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. Before issuance of the final payment certificate, the Contractor shall deposit with the Owner a certificate from the Clerk of Court and Ex-Officio Recorder of Mortgages from the Parish in which the Work is performed to the effect that no liens have been registered against Contract Work.

- 28.04 When, in the opinion of the Contractor, the Work provided for and contemplated by the Contract Documents has been substantially completed, the Contractor shall notify the Owner in writing that the Work is substantially complete and request a final inspection. The Owner shall proceed to perform such final inspection accompanied by the Contractor. Any and all Work found by this inspection to be Defective or otherwise not in accordance with the plans and Specifications shall be corrected to the entire satisfaction of the Owner and at the sole expense of the Contractor. If the Contract is found to be incomplete in any of its details, the Contractor shall at once remedy such defects, and payments shall be withheld and formal acceptance delayed until such Work has been satisfactorily completed.
- 28.05 If payment is requested on the basis of materials and equipment not incorporated in the Work, but delivered and suitably stored and protected from damage and theft at the site, the Request for Payment shall also be accompanied by such data, satisfactory to the Owner, as will establish Owner's title to the material and equipment and protect its interest therein, including applicable insurance.
- 28.06 Each subsequent Request for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of Contractor's obligations reflected in prior Request for Payment.
- 28.07 Each subsequent request for payment shall include an affidavit by Contractor that Contractor, all subcontractors, agents, material suppliers and all other persons supplying material to the project upon which State of Louisiana and/or St. Tammany sales taxes are lawfully due have paid these taxes and that all supplies and materials purchased for this project and for which Contractor has been paid have had all lawfully due State and/or St. Tammany sales taxes paid.
- 28.08 The Bid Proposal, unless otherwise modified in writing, and the Contract constitute the complete Project. The Contract Prices constitute the total compensation payable to Contractor and the cost of all of the Work and materials, taxes, permits and incidentals must be included into the Bid submitted by the Contractor and included into those items listed on the Proposal.
- 28.09 Any additional supporting data required by the Owner in order to substantiate Contractor's request for payment shall be furnished by Contractor at no cost to the Owner.
- 28.10 Owner may withhold from payment to Contractor as may be necessary to protect itself from loss on account of:
- (1) Defective and/or inferior work;
 - (2) Damage to the property of Owner or others caused by Contractor;
 - (3) Failure by Contractor to make payments properly to sub-contractors or to pay for labor, materials or equipment used on this project;
 - (4) Failure by Contractor to pay taxes due on materials used on this project;
 - (5) Damage by Contractor to another Contractor;
 - (6) Insolvency;
 - (7) Bankruptcy, voluntary or involuntary;
 - (8) Revocation of corporate status;
 - (9) Failure to follow corporate formalities;
 - (10) Unprofessional activities;
 - (11) Unworkmanlike performance;
 - (12) Fraud and/or misrepresentation of any kind.

29.00 ACCEPTANCE AND FINAL PAYMENT(S)

- 29.01 Upon receipt of written notice from Contractor that the work is substantially complete and usable by Owner or the Public in suitable manner, the Owner and the Contractor shall jointly inspect the work.

- 29.02 If the Owner by inspection determines that the work is not substantially complete in a suitable manner for use by the Owner or the Public, then the Owner shall so notify the Contractor in writing stating such reason. All reasons need not be disclosed unless actually known. The Owner is afforded an opportunity to amend said notices as are reasonably possible.
- 29.03 If the Owner by its inspection determines that the work is substantially complete, it shall prepare a list of all items not satisfactorily completed and shall notify the Contractor and Owner in writing that the work is substantially complete and subject to satisfactory resolution of those items on the list (punch list). Punch lists may be amended from time to time by Owner in the event that additional deficiencies are discovered. In accordance with LSA-R.S. 38:2248(B), any punch list generated during a construction project shall include the cost estimates for the particular items of work the design professional has developed based on the mobilization, labor, material, and equipment costs of correcting each punch list item. The design professional shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The contract agency shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon the expiration of the forty-five (45) day lien period. The provisions of this Section shall not be subject to waiver.
- 29.04 Upon determination of substantial completeness with the punch list, the Contract Time is interrupted and the Contractor is given a reasonable time not to exceed thirty (30) consecutive calendar days to effect final completion by correcting or completing all of those items listed on the punch list. If the items on the punch list are not completed in a satisfactory manner within the thirty day period, then the Contract Time will begin to run again and will include for purposes of determining liquidated damages the thirty day period the grace period being withdrawn.
- 29.05 Upon receipt by Owner of written determination that all work embraced by the contract has been completed in a satisfactory manner, the Owner shall provide a written acceptance to Contractor who shall record Owner's written acceptance with the recorder of Mortgages, St. Tammany Parish. The Contractor shall properly prepare, submit and pay for all costs associated with said Acceptance. The Contractor is also responsible for preparation, re-submission and payment of any and all updated certificates.
- 29.06 Retainage monies, minus those funds deducted in accordance to the requirements of this agreement including but not limited to Paragraph 28.10, shall be due Contractor not earlier than forty-six (46) calendar days after recordation of certificate of Owner's acceptance provided the following:
- (1) Contractor shall prepare, secure, pay for and submit clear lien and privilege certificate, signed and sealed by Clerk of Court or Recorder of Mortgages, Parish of St. Tammany and dated at least forty-six (46) days after recordation of certificate of acceptance;
 - (2) Ensure that the official representative of the Owner has accepted as per LSA-R.S. 38:2241.1, *et seq.* and that all following sub-sections have been properly satisfied as per law;
 - (3) Ensure that all signatures are affixed and that there exists the requisite authority for all signatures;
 - (4) Ensure accurate and proper legal descriptions;
 - (5) Properly identify all parties and/or signatories;
 - (6) Properly identify all mailing addresses;
 - (7) Correctly set for the amount of the contract, together with all change orders;
 - (8) Set out a brief description of the work performed;
 - (9) Reference to any previously recorded contract, lien or judgment inscription that may affect the property;

- (10) Certification that substantial completion has occurred, together with any applicable date(s);
- (11) Certification that no party is in default and/or that the project has been abandoned.

29.07 After securing the clear lien and privilege certificate the Contractor shall prepare its final application for payment and submit to Owner. The Owner shall approve application for payment, or state its objections in writing and forward to Contractor for resolution.

30.00 NOTICE AND SERVICE THEREOF

30.01 Any Notice to Contractor from the Owner relative to any part of this Contract shall be in writing and shall be considered delivered and the service thereof completed when said notice is posted; by certified mail, return receipt requested to the said Contractor at its last given address, or delivered in person to said Contractor or its authorized representative on the Work.

31.00 INTENTION OF THESE GENERAL CONDITIONS

31.01 These General Conditions shall be applicable to all contracts entered into by and between the Owner and Contractors, except as may be altered or amended with the consent of the Owner, and/or provided for in the Special Conditions of each contract. Contractor shall be presumed to have full knowledge of these General Conditions which shall be applicable to all contracts containing these General Conditions, whether Contractor has obtained a copy thereof or not.

32.00 SEVERABILITY

32.01 If any one or more or part of any of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

32.02 **CHANGING THESE CONDITIONS:** Owner reserves the right to change or modify these General Conditions as it deems best, or as required by law. The General Conditions may also be modified for a particular project by the use of Special Conditions prior to the issuance of the Advertisement for Bid. However, once an advertisement for bid is made for any specific project, any changes to the General Conditions as they affect that specific project must be made in writing and issued via an addendum in accordance with State Law.

33.00 LAW OF THE STATE OF LOUISIANA

33.01 The Contract Documents shall be governed by the Law of the State of Louisiana.

33.02 The Contractor agrees to pay reasonable attorney's fees and other reasonable attendant costs, in the event that it becomes necessary for the Owner to employ an attorney in order to enforce compliance with or any remedy relating to any covenants, obligations, or conditions imposed upon the Contractor by this Agreement. Attorney fees shall be based upon the prevailing hourly rate of attorney rates in the private sector. In no case shall the hourly rate be less than \$175.00 per hour. All attorney fees collected shall be paid the operating budget of the Office of the Parish President.

33.03 The jurisdiction and venue provisions shall apply to all contractors, sureties, and subcontractors. The 22nd Judicial District for the Parish of St. Tammany shall be the court of exclusive jurisdiction and venue for any dispute arising from these General Conditions and/or any contract executed in conjunction with these General Conditions. All parties specifically waive any rights they have or may have for removal of any disputes to Federal Court, or transfers to different State District Court.

33.04 Contractor warrants that it has and/or had received a copy of these General Conditions at all times material hereto; Contractor further agrees that it has read and fully and completely understands each and every condition herein.

33.05 The property description will be more fully set out by an attached exhibit.

33.06 The Contractor warrants that it has the requisite authority to sign and enter this agreement.

33.07 It is specifically understood and agreed that in the event Contractor seeks contribution from the Parish or pursues its legal remedies for any alleged breach of this agreement by the Parish, then the following list of damages SHALL NOT BE RECOVERABLE BY CONTRACTOR. This list includes, but is not limited to:

1. indirect costs and/or expenses;
2. direct costs and/or expenses;
3. time-related costs and/or expenses;
4. award of extra days;
5. costs of salaries or other compensation of Contractor's personnel at Contractor's principal office and branch offices;
6. expenses of Contractor's principal, branch and/or field offices;
7. any part of Contractor's capital expenses, including any interest on Contractor's capital employed for the work;
8. any other charges related to change orders;
9. overhead and general expenses of any kind or the cost of any item not specifically and expressly included in Cost of Work.

33.08 DEFAULT AND WAIVERS

It is understood that time is of the essence. It is specifically understood between the parties that Contractor waives any and all notice to be placed in default by the Owner. This subsection shall supersede and prime any other subsection herein above that is in conflict. The Owner specifically reserves its right and specifically does not waive the requirement to be placed in default by the Contractor as per law.

33.09 St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany Parish Government. At any time St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.

33.10 It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be concise and logically presented to facilitate review by the Parish. The written protest shall include:

1. The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;
2. A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;
3. Copies of relevant documents;
4. All information establishing that the protester is an interested party and that the protest is timely; and
5. A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to Director of Procurement, St. Tammany Parish Government, P.O. Box 628, Covington, LA 70434.

The protest review shall be conducted by the Parish Procurement Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and, fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

Last day to submit questions and/or verification on comparable products will be no later than 2:00 pm CST, seven (7) working days prior to the opening date of the bid/proposal due date. Further any questions or inquires must be submitted via fax to 985-898-5227, or via email to Procurement@stpgov.org. Any questions or inquires received after the required deadline to submit questions or inquires will not be answered.

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____ INCORPORATED, DULY NOTICED AND HELD ON _____, A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

RESOLVED THAT _____, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE PARISH OF ST. TAMMANY OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BEEN REVOKED OR RESCINDED.

SECRETARY-TREASURER

DATE

Certificate of Insurance Instructions

The below information is intended to guide Contractors on what information is needed to be listed on the Certificate of Insurance. All Insurance limit requirements can be found in Attachment D.

- **Certificate Holder** – STPG must be listed as the certificate holder, and it must include our address of: P.O. Box 628, Covington, LA 70434
 - Reason: the certificate holder is where cancellations of coverage, or updated certificates are mailed. If a vendor terminates a policy, we will be notified.
- **Additional Insured** – We must be named as an additional insured so that if there is a lawsuit against the vendor for a project, their coverage will cover STPG as well if we are named in the lawsuit.
 - We must be named in the Description of Operations box – reason: there could be other additional insureds, and we want to have no doubt that we are one of the additional insureds.
 - We must be named as additional insured on the following coverages: General liability, Auto Liability, Umbrella/Excess Liability, Environmental/Pollution Liability.
 - Professional Liability policies do not allow for an additional insured by most carriers.
- **Project Name & Contract #** - We need this listed in the Description of Operations, again so that if there is a lawsuit, we have proof that coverage was active for that project.
- **Waiver of Subrogation** – This can either be listed in the Description of Operations or checked off in the appropriate columns.

From the Insurance Requirement form:

Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, 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.

- **Owners Protective Liability (OPL) or (OCP)** – Certificate of Insurance for OCP names St. Tammany Parish Government as the Insured and the Certificate Holder.
- Sample of Certificate of Insurance (COI) can be found on page 2.
- Please refer to this section in the package labeled “Insurance Requirements” for limits required for this project

Any questions regarding insurance requirements please contact the Risk Department at 985-898-5226 or email riskman@stpgov.org



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

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

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

PRODUCER	CONTACT NAME:		
	PHONE (A/C, No. Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED	INSURER A :		
	INSURER B :		
	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

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

Project Name:
Contract #:

(Name St. Tammany Parish Government as an additional insured).

CERTIFICATE HOLDER**CANCELLATION**St. Tammany Parish Government
P.O. Box 628
Covington, LA 70434

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

AUTHORIZED REPRESENTATIVE

Bond No.: _____

**CONTRACT AGREEMENT
BETWEEN PARISH AND CONTRACTOR**

BY: ST. TAMMANY PARISH GOVERNMENT

**UNITED STATES OF
AMERICA**

WITH:

**STATE OF LOUISIANA
ST. TAMMANY PARISH**

This agreement is entered into this _____ day of _____, 20____, by and between: «txtREQCompanyName», hereinafter called the "Contractor", whose business address is «txtREQAddress», «txtREQCity», «txtREQState» «txtREQZip» and the St. Tammany Parish Government, hereinafter called the "Parish", whose business address is P.O. Box 628, Covington, LA 70434 (collectively, the "Parties") for «txtPROJECTNAME» project. Witnessed that the Contractor and the Parish, in consideration of premises and the mutual covenants, consideration and agreement herein contained, agree as follows:

1. SCOPE OF SERVICES

The Contractor shall furnish all labor and materials and perform all of the work required to build, construct and/or complete in a thorough and workmanlike manner:

«txtScopeSummary»

2. CONSTRUCTION DOCUMENTS

It is recognized by the Parties herein that said Construction Documents, including by way of example and not of limitation, the plans and Specifications, General Conditions, Supplementary General Conditions, any addenda thereto, the drawings (if any), and the bid, quote or other procurement documents impose duties and obligations upon the Parties herein, and said Parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Construction Documents are incorporated herein by reference with the same force and effect as though said Construction Documents were herein set out in full. Copies of the aforementioned Construction Documents are in the possession of both the Contractor and the Parish for reference.

3. TIME FOR COMPLETION

The work shall be commenced on a date to be specified in a written order of the Parish and shall be completed within «intCompletionTime» calendar days from and after said date.

4. COMPENSATION TO BE PAID TO THE CONTRACTOR

The Parish will pay and the Contractor will accept in full consideration for the performance of the Contract the sum of «curREQGrandTotal» dollars.

5. PERFORMANCE AND PAYMENT BOND

To these presents personally came and intervened _____,
(Name of Attorney in Fact)
herein acting for _____, a corporation organized
(Surety)
and existing under the laws of the State of _____, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this Contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his company, as surety for the said Contractor, unto the said Parish, up to the sum of «curREQGrandTotal». The condition of this performance and payment bond

shall be that should the Contractor herein not perform the Contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Parish from all costs and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have fulfilled obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example, workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said surety agrees and is bound to so perform the Contract and make said payment(s).

Contractor and Parish specifically agree to and recognize (1) the statutory employer relationship existing between the Parish and any employees performing work under this Contract as employees of the Contractor or employees of the "Sub-Contractor", and (2) that the work performed by the employees of the Contractor and the employees of the "Sub-Contractor" is part of the Parish's business, occupation or trade and is essential to the ability of the Parish to generate their products or services, all of which is in accordance with LSA-R.S. 23:1061, and as may be amended.

6. LIABILITY AND INDEMNIFICATION

A. Duty to Defend

Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.

B. Contractor Liability

Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.

C. Force Majeure

It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.

D. Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its

owners, agents, employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.

E. Intellectual Property Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and

minimal delays of performance, shall at its sole expense and in the following order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not furnished by Contractor; or, iii) use of the

product, material or service in other than the specified operating conditions and environment.

7. MODIFICATION OF CONTRACT TERMS

Provided that any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Parish of any extensions of time for the performance of the Contract, or any other forbearance on the part of either the Parish or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

8. TERMINATION, CANCELLATION, AND SUSPENSION

A. Termination

The term of this Contract shall be binding upon the Parties hereto until the work has been completed by the Provider and accepted by the Parish, and all payments required to be made to the Provider have been made. But, this Contract may be terminated upon thirty (30) days written notice under any or all of the following conditions:

- 1) By mutual agreement and consent of the Parties hereto;
- 2) By the Parish as a consequence of the failure of the Provider to comply with the terms, progress, or quality of the work in a satisfactory manner, proper allowances being made for circumstances beyond the control of the Provider;
- 3) By either party upon failure of the other party to fulfill its obligations as set forth in this Contract;
- 4) By the Parish with less than thirty (30) days' notice due to budgetary reductions and changes in funding priorities by the Parish;
- 5) In the event of the abandonment of the project by the Parish.

Upon termination, the Provider shall be paid for actual work performed prior to the Notice of Termination, either based upon the established hourly rate for services actually performed, or on a pro-rata share of the basic fee based upon the phase or percentage of work actually completed, depending on the type of compensation previously established under this Contract.

Upon Termination, the Provider shall deliver to the Parish all original documents, notes, drawings, tracings, computer files, and other files pertaining to this Contract or the Work performed, except for the Provider's personal and administrative files.

B. Cancellation

The continuation of this Contract is contingent upon the appropriation of funds to fulfill the requirements of the Contract by the Parish. If the Parish fails to appropriate sufficient monies to provide for the continuation of this or any other Contract, or if such appropriation is reduced by the veto of Parish President by any means provided in the appropriations Ordinance to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the Contract, the Contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated. It is understood and agreed that paragraph (9)(C) below may preempt this paragraph, all at the exclusive and unilateral option of the Parish.

C. Suspension

Should the Parish desire to suspend the work, but not definitely terminate the Contract, the Parish shall supply the Provider with thirty (30) days' notice. The Parish will also

supply Provider thirty (30) days' notice that the work is to be reinstated and resumed in full force. Provider shall receive no additional compensation during the suspension period. The Parties may revisit the terms of this Contract during the suspension period. The suspension shall not exceed six (6) months, unless mutually agreed upon between the Parties.

- D.** Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.
- E.** In the event of a default and/or breach of this agreement and this matter is forwarded to legal counsel, then the prevailing party may be entitled to collect a reasonable attorney fees and all costs associated therewith whether or not litigation is initiated. Attorney fees shall be based upon the current, reasonable prevailing rate for counsel in the private

sector. The Parties agree to be responsible for such attorney fees, together for all with legal interest from date of agreement breach, plus all costs of collection.

- F.** Termination or cancellation of this agreement will not affect any rights or duties arising under any term or condition herein.
- G.** As to the filing of voluntary or involuntary bankruptcy by Provider, Provider agrees that if any execution or legal process is levied upon its interest in this Contract, or if any liens or privileges are filed against its interest, or if a petition in bankruptcy is filed against it, or if it is adjudicated bankrupt in involuntary proceedings, or if it should breach this Contract in any material respect, the Parish shall have the right, at its unilateral option, to immediately cancel and terminate this Contract. In the event that Provider is placed in any chapter of bankruptcy, voluntarily or involuntarily, or otherwise triggers any provision of the preceding sentence herein, it is understood and agreed that all materials, goods and/or services provided shall be and remain the property of the Parish. All rights of Provider as to goods, wares, products, services, materials and the like supplied to Parish shall be deemed forfeited.

9. RECORDATION OF CONTRACT

Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law.

10. AUTHORITY TO ENTER CONTRACT

The undersigned representative of Contractor warrants and personally guarantees that he/she has the requisite and necessary authority to enter and sign this Contract on behalf of the corporate entity, partnership, etc. The undersigned Parties warrant and represent that they each have the respective authority and permission to enter this Contract. In the event that Contractor is a member of a corporation, partnership, L.L.C., L.L.P., or any other juridical entity, the Parish requires, as an additional provision, that Contractor supply a certified copy of a corporate resolution authorizing the undersigned to enter and sign this Contract. Another option to fulfill this additional provision he/she can supply Louisiana Secretary of State Business filings confirming that he/she is a managing member of a

corporation, partnership, L.L.C., L.L.P., or any other juridical entity which authorizes the undersigned to enter and sign this Contract.

In Witness thereof, the Parties hereto on the day and year first above written have executed this Contract in One (1) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

WITNESSES:

CONTRACTOR:

Signature

Signature

Print Name

Print Name

Signature

Title

Print Name

Date

Bond No.: _____

WITNESSES:

**ST. TAMMANY PARISH
GOVERNMENT:**

Signature

Michael B. Cooper
Parish President

Print Name

Date

Signature

Print Name

APPROVED BY:

**Assistant District Attorney- Civil
Division**

(Surety)

Signature

Date

Print Name

Section 12

**Department of the Treasury (DOT) & American Rescue Plan Act (ARPA)
Federal Contract Clauses
WATER SECTOR PROGRAM
31 CFR Part 35 Subpart A**

1. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon

contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

2. DAVIS-BACON ACT, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

3. COMPLIANCE WITH THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT.

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

than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

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

(3) *Withholding for unpaid wages and liquidated damages.* The Parish shall upon its own action or upon written request of an authorized representative of the Department of Labor or U.S. Treasury withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

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

4. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

5. CLEAN AIR ACT

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.*

(2) The Contractor agrees to report each violation to the Parish and understands and agrees that the Parish will, in turn, report each violation as required to assure notification to the federal awarding agency, and the appropriate Environmental Protection Agency Regional Office.

(3) The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by ARPA.

6. FEDERAL WATER POLLUTION CONTROL ACT

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 7401 *et seq.*

(2) The Contractor agrees to report each violation to the Parish and understands and agrees that the Parish will, in turn, report each violation as required to assure notification to the Federal awarding agency, and the appropriate Environmental Protection Agency Regional Office.

(3) The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by ARPA.

7. SUSPENSION AND DEBARMENT

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the Parish. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the Parish, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

8. BYRD ANTI-LOBBYING ACT

The Contractor will be expected to comply with Federal statutes required in the Anti-Lobbying Act. Contractors who apply or bid for an award of more than \$100,000 shall file the required certification. Each tier certifies to the tier above that it will not and has not used federally appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the federal awarding agency.

9. PROCUREMENT OF RECOVERED MATERIALS

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

- i. Competitively within a timeframe providing for compliance with the Contract performance schedule;
- ii. Meeting Contract performance requirements; or
- iii. At a reasonable price.

Information about this requirement, along with the list of EPA-designate items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

10. PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES.

(a) *Definitions.* As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in Public Law 115-232, section 889, Prohibitions on Expending ARPA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause—

(b) *Prohibitions.*

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug. 13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, the contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from a federal Agency to:

- (i) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- (ii) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- (iii) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system as described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). (a) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). (b) Telecommunications or video surveillance services provided by such entities or using such equipment. (c) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country;
- (iv) Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(3) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(4) See Public Law 115-232, section 889 for additional information.

(5) See also § 200.471.

(c) *Exceptions.*

(1) This clause does not prohibit contractors from providing—

- (i) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- (ii) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) By necessary implication and regulation, the prohibitions also do not apply to:

- (i) Covered telecommunications equipment or services that:
 - i. Are *not used* as a substantial or essential component of any system; *and*
 - ii. Are *not used* as critical technology of any system.
- (ii) Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

(d) *Reporting requirement.*

(1) In the event the contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the contractor is notified of such by a subcontractor at any tier or by any other source, the contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts*. The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments.

11. DOMESTIC PREFERENCES FOR PROCUREMENTS.

As appropriate, and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

12. COMPLIANCE WITH FEDERAL EXECUTIVE ORDERS

This is an acknowledgement that American Rescue Plan Act will be used to fund the Contract only. The Contractor will comply with all applicable federal law, regulations, executive orders, policies, procedures, and directives.

13. NO OBLIGATION BY THE FEDERAL GOVERNMENT

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

14. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

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

15. CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS.

(a) Any party to this contract must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. These steps are also required for the hiring of any subcontractors under this contract.

(b) Affirmative steps must include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

- (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
- (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

16. COPYRIGHT AND DATA RIGHTS

The Contractor grants to the Parish, a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to the Parish or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to the Parish data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the Parish.

Note:

Davis-Bacon Act is NOT applicable to this project.

Summary of Technical Specifications

DIVISION 1

Section Number	Section Title
01010	Summary of Work
01015	Control of Work
01025	Measurement and Payment
01026	Schedule of Values
01041	Project Coordination
01043	Job Site Administration
01045	Cutting and Patching
01046	Modification to Existing Piping
01050	Field Engineering and Surveying
01090	Reference Standards
01152	Requests for Payment
01153	Change Order Procedures
01200	Project Meetings
01310	Construction Scheduling
01335	Site Condition Survey
01340	Shop Drawings, Product Data, and Samples
01380	Construction Photographs and Videos
01390	Excavation Plan
01410	Testing Laboratory Services
01505	Mobilization
01510	Temporary Utilities
01530	Protection of Existing Facilities and Property
01550	Site Access
01560	Temporary Environmental Controls
01570	Traffic Regulation
01600	Material and Equipment
01620	Storage and Protection
01700	Contract Closeout
01710	General Site Cleaning
01720	Project Record Documents
01730	Operating and Maintenance Data
01740	Warranties and Bonds

DIVISION 2

Section Number	Section Title
02100	Site Preparation
02140	Dewatering
02160	Sheeting, Shoring and Bracing
02200	Earthwork
02220	Excavation, Backfill, Fill and Grading for Structures
02221	Earth Excavation and Backfill in Trenches
02272	Geotextile Fabric

Summary of Technical Specifications

02350	Stone Base Course
02500	Roadway and Street Restoration
02505	Horizontal Directional Drilling
02515	High Density Polyethylene Pipe and Fittings
02615	Ductile Iron Pipe and Fittings
02622	Polyvinyl Chloride Pipe
02658	Connection to and Work on the Existing System
02701	Water Mains
02900	Landscaping
02999	Miscellaneous Work and Cleanup

DIVISION 3

Section Number	Section Title
03100	Concrete Formwork
03200	Concrete Reinforcement
03300	Cast-in-place Concrete
03350	Concrete Finishes
03455	Manholes

DIVISION 4 (NOT USED)

DIVISION 5

Section Number	Section Title
05500	Miscellaneous Metals

DIVISION 6 (NOT USED)

DIVISION 7 (NOT USED)

DIVISION 8 (NOT USED)

DIVISION 9 (NOT USED)

DIVISION 10 (NOT USED)

DIVISION 11 (NOT USED)

DIVISION 12 (NOT USED)

DIVISION 13 (NOT USED)

DIVISION 14 (NOT USED)

Summary of Technical Specifications

DIVISION 15

Section Number	Section Title
15100	Valves and Appurtenances
15250	Fire Hydrants
15301	Programable Automatic Flushing System

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

- A. The work under this contract consists of constructing approximately 1,925 linear feet of water main. The new water main will consist of 10" PVC and 12" HDPE. The existing 6" and 8" water mains will remain in-place and in-service during and after construction of the new water main. The new water main will be constructed using a combination of open-cut and trenchless construction. The new water main will be constructed to help improve fire flow and water quality. The Contractor shall construct and "switch over" approximately 39 services after the residents have been informed.
- B. The Contractor shall furnish all labor, materials, equipment, tools, services, and incidentals to complete all work required by these specifications and as shown on the drawings.
- C. The Contractor shall perform the work complete, in place and ready for continuous service, and shall include repairs, replacements, and restoration required as a result of damages caused during this construction.
- D. The Contractor shall furnish and install all materials, equipment, and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.

1.02 CONTRACTS

The Contract consists of lump sum and unit price bid items. The lump sum price shall include all labor, materials, equipment and incidentals required to construct the work complete in place. No extras shall be granted for any additional work unless specifically defined as a unit price item.

1.03 WORK SEQUENCE

- A. All work to be done under this contract shall be done with minimum inconvenience to the users of the water and sewer systems. The Contractor shall coordinate his work with Department of Utilities and private property owners such that water and sewer service is maintained to all users to the maximum extent possible.
 - 1. Water and/or sewer service interruptions shall be coordinated and scheduled with Department of Utilities prior the interruptions to the extent possible.
 - 2. The Department of Utilities shall be notified immediately by phone and in writing of

any emergency or unforeseen interruptions of water and/or sewer service. The contractor shall call (985) 893-1717 to notify the Engineer and Compliance Manager of the service interruption. Written notification shall be provided to the specified points of contact determined the pre-construction meeting.

- B. Construct work in stages to accommodate the Owner's use of the premises during the construction period; coordinate the construction schedule and operations with the Owner's representative.
- C. Construct the work in stages to provide for public convenience. Do not close off public use of facilities until completion of one stage of construction will provide alternative usage.

1.04 CONSTRUCTION AREAS

- A. Contractor shall limit his use of the construction areas for work and storage to allow for:
 - 1. Work by other contractors.
 - 2. Owner use.
 - 3. Public use.
- B. Coordinate use of work site under direction of Engineer.
- C. Assume full responsibility for the protection and safekeeping of products under this contract, stored on the site.
- D. Move any stored products, under Contractor's control, which interfere with operations of the Owner or separate contractor.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.05 OWNER OCCUPANCY

- A. Owner will have full access to and use of all facilities and sites during the entire period of construction for the conduct of his normal operations. Cooperate with Owner's representative in all construction operations to minimize conflict, and to facilitate Owner usage.
- B. Contractor shall at all times conduct his operations as to insure the least inconvenience to the general public.

1.06 SITE CONDITIONS

- A. Because of the location of the job site is on the grounds of the two mobile home parks (MHP), it is imperative that the Contractor schedule and conduct his work in such a manner so as not to interfere in any way with the operation of the parks. Trucking

through the MHP, delivering and storing materials and equipment, shall be done with the approval of the engineer. The Contractor's personnel will be allowed to enter the MHP and park private vehicles on site; however, they will be allowed to bring equipment and company vehicles only into the sites as necessary in the execution of this contract but may be required to remove them if their presence interferes with the operations of the MHP, all at the discretion of the Engineer. All roadways must remain open throughout the entire construction period.

- B. All work of this contract MUST be coordinated with the Department of Utilities (DU) through the Engineer, with proper advanced notice.
- C. Water service to the existing MHP must not be interrupted, the St. Tammany Parish Government will communicate with the residence of each MHP of the impending source water change and the tie-in to the public water system.
- D. Any outage of these MHP and/or other damages due to the contractor's negligence shall be repaired immediately by the Contractor at no additional cost to the contract. Contractor shall inform the DU at least 72 hours in advance for any coordination required to tie-in the existing lines to the new lines, weather permitting. No work shall begin without express written approval of the DU.
- E. As part of this contract work, new water mains and service connections shall be constructed throughout by the contractor as shown in these documents. All active mobile homes and buildings within the MHP will be connected to the St. Tammany Parish owned and operated community water system upon completion of this capital project.
- F. The existing deficient privately owned and operated water system servicing the development shall be removed from service and abandoned by the Contractor once the new water infrastructure has been constructed, inspected, and accepted by the Engineer.
- G. No sewer work is included in this contract work.

1.07 BIDDERS TO EXAMINE LOCATION AND PLANS

- A. Each Bidder shall make a personal examination at the location of the proposed work and the surrounding area. They shall thoroughly acquaint themselves with the details of the work to be done, conditions, and obstacles likely to be encountered in the performance and completion of the work. Bidders shall familiarize themselves as to the facilities for the transportation, handling, and storage of equipment and materials.
- B. Each bidder shall carefully study the plans, specifications and other contract documents to thoroughly familiarize themselves to the conditions under which the work is to be done, the character, qualities, quantities of work to be performed, materials to be furnished, and be prepared to execute a finished job in every particular.

1.08 UTILITY LOCATION

- A. The locations of all utilities shown on the plans are approximate. Contractor shall field verify all utilities and their tie-in area prior to any work commences.
- B. Any damages to any utility line due to lack of the contractor's field verification shall be repaired immediately to the satisfaction of the Engineer, all at no additional cost to the contract.

1.09 TIE-INS

- A. The location and condition of tie-ins are approximate. It is the contractor's responsibility, as the first order of business to field verify the location and the conditions of the tie-ins prior to ordering any materials and inform the Engineer of the findings.
- B. Additionally, once the tie-in sites are exposed, the contractor **MUST** notify the DU to operate and exercise the isolation valve(s) to verify if they are operable. (**ALL existing valves shall be operated by operations personnel of DU only**).
- C. Lines shall be installed and disinfected in accordance with AWWA standard C651 (Disinfecting Water Mains) as required by LAC 51:XII.245.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. The Contractor agrees that the work and duties required to be performed in accordance with the Contract Documents shall meet and comply with all environmental requirements including the laws and regulations of the United States and the State of Louisiana.
- B. The Contractor shall develop a plan to report, contain/by-pass and clean up all sewage spills or unanticipated hazards that would adversely affect the health of the community.
- C. For public areas that have come in contact with overflowed sewage, the Contractor shall take reasonable action(s) to implement disinfection procedures. Generally, these procedures will involve an application of an oxidizing agent such as a diluted chlorine solution on constructed surfaces (streets, driveways, walls, etc.) and a lime application on organic surfaces (lawns, soil areas, etc.). The level and extent of disinfection shall be determined in the field. It is not the intent of this disinfection procedure to infer that total pathogen destruction has been achieved, nor that any other level of disinfection has been achieved.
- D. **REPORT:** A report shall be given immediately to the DU Compliance Office (985-893-1717). The information communicated in the report must include location, nature of problem, name of project, name of company performing work, name of the

individual making the call, time of incident, volume of spill (gallons), method of remediation and clean up, and other pertinent data as necessary.

1.11 NOISE and SOUND ISSUE

- A. Contractor's attention shall be given specifically to St. Tammany Parish Ordinance, Article IV – Noise and Sound, which in part states that the sound measured by a performer taken at least 25 feet from the source of the noise cannot exceed 70 decibels between Noon and 9 p.m. Between 9 p.m. and Noon, the sound measurement taken at least 25 feet from the source of the noise cannot exceed 55 decibels.

1.12 NIGHT, WEEKEND OR HOLIDAY WORK

- A. Normal work hours are 7:00 a.m. to 6:00 p.m. Monday through Friday, excluding holidays. Hours requested outside normal work hours should be requested in writing at least 72 hours in advance. Contractor shall be required to pay resident inspection fees for work outside normal working hours. Night, weekend or holiday work requiring the presence of an Engineer or inspector will be permitted only in cases of emergency, and then only to such an extent as is absolutely necessary and with the written permission of the DU through the Engineer. In the event such work becomes necessary, no extra payment will be made therefor.

1.13 LONG LEAD ITEMS

- A. Due to long delivery of certain items specified in this contract work, it is strongly recommended that the Contractor order those long delivery items as soon as Notice of Award has been issued (this includes any approved substitute equipment). Contract substantial completion date shall not be extended due to contractor's negligence in ordering material and/or equipment in timely manner.

1.14 AS-BUILT DRAWINGS

- A. The Contractor shall furnish one (1) neat and legibly marked blue line set of contract drawings to depict actual "as-built" conditions.
- B. The "as-built" drawings shall show all construction, elevation, equipment, mechanical and electrical systems and connections as installed or built.
- C. The work under this contract will not be considered "complete" until "as-built" drawings, prepared to the satisfaction of the Engineer, are received.
- D. There will be no direct payment for furnishing the "as-built" drawings specified above.
- E. Provide copies of operation and maintenance manuals for all equipment. Manuals shall include spare parts lists recommended by the manufacturer.

1.15 JOB SITE DRAWINGS AND SPECIFICATIONS

- A. A complete and current set of contract drawings and specifications (including any addenda) shall be maintained on the job site by the Contractor.
- B. One copy of all approved shop drawings, equipment or material drawings, etc. shall be maintained on the job site by the Contractor.

1.16 EMERGENCY TELEPHONE

- A. The Contractor shall, before contract work begins, furnish to the Engineer telephone numbers at which company officers and/or responsible persons can be contacted at night, weekends and holidays in case of emergencies.

1.17 CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS

- A. In case of the conflict between the drawings and the specifications, the Engineer shall be the sole authority in determining which of the two shall take precedence in the Contract Documents. Such conflict shall not be a basis for an extra expense to the Parish.
- B. The Contractor is hereby cautioned to base his/her price and work upon the costlier item in event of conflict as no claim for extra expense will be entertained on this basis.

1.18 INVOICING

- A. Due to special funding of this project, the contractor will be required to submit its pay applications accordingly. Detail of this procedure will be discussed at the Pre-Construction meeting.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01015

CONTROL OF WORK

PART 1 - GENERAL

1.01 WORK PROGRESS

The Contractor shall furnish personnel and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the Proposal. If at any time such personnel or equipment appears to the Engineer to be inefficient, inappropriate, or insufficient for securing the quality of work required for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character, or increase the personnel and equipment, and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

1.02 PRIVATE LAND

The Contractor shall not enter or occupy private land outside of easements, except by permission of the Owner.

1.03 WORK LOCATIONS

Work shall be located substantially as indicated on the drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons. Where fittings are noted on the drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

1.04 OPEN EXCAVATIONS

A. All open excavations shall be adequately safeguarded by providing temporary fences, barricades or caution signs, lights, coverings and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open trench, prohibiting stacking excavated material in the street, and requiring that the trench shall not remain open overnight.

- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be barricaded and well lighted at all times when construction is not in progress.

1.05 DISTRIBUTION SYSTEMS AND SERVICES

- A. The Contractor shall interrupt water, telephone, Cable TV, sewer, gas, or other related utility services and disrupt the normal functioning of the system as little as possible. He shall notify the Engineer well in advance of any requirement for dewatering, isolating, or relocating a section of a utility, so that necessary arrangements may be made with the appropriate agency.
- B. If it appears that utility service will be interrupted for an extended period, the Engineer may order the Contractor to provide temporary service lines. Inconvenience of the users shall be the minimum, consistent with existing conditions. The safety and integrity of the system is of prime importance in scheduling work.

1.06 TEST-PITS

Test pits for the purpose of locating underground pipelines or structures in advance of the construction shall be excavated and backfilled by the Contractor prior to commencement of construction. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. This work shall be considered incidental to the construction and no additional payment will be made for exploration.

1.07 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Engineer.
- B. Along the location of this work all fences, walks, brushes, trees, shrubbery, and other physical features shall be protected and restored in a thoroughly workmanlike manner. Fences and other features removed by the Contractor shall be replaced in the location indicated by the Engineer as soon as conditions permit. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be re-graded and seeded.
- C. Trees close to the work shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are liable to damage because of his operations,

but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs, and roots of trees shall be repaired by dressing, cutting, and painting according to approved methods, using only approved tools and materials.

- D. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the contract, and all costs in connection therewith shall be included in the lump sum price.

1.08 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public water supply is available, the Contractor may purchase water for all construction purposes.
- B. The express approval of the Tammany Utilities shall be obtained in writing. Hydrants shall only be operated under the supervision of the Tammany Utilities personnel. Contractor shall obtain a water meter from the Tammany Utilities and pay all fees involved with obtaining and using the public water supply.

1.09 MAINTENANCE OF FLOW

The Contractor shall, at his own cost, provide for the flow of sewers, drains, and water courses interrupted during the progress of the work, and shall immediately cart away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.

1.10 CLEANUP

During the course of the work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.

1.11 COOPERATION WITHIN THIS CONTRACT

- A. All firms or persons authorized to perform any work under this contract shall cooperate with the General Contractor and his subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

1.12 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from damage in any way. No wheeling or walking or placing of heavy loads on it shall be allowed and all portions damaged shall be reconstructed by the Contractor at his own expense.
- B. All structures shall be protected in a manner approved by the Engineer. If, in the final inspection of the work, any defects, faults, or omissions are found, the Contractor shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein, for at least the guarantee period described in the contract.

1.13 MAINTENANCE OF HOUSE SERVICES

At all times continuous water and sewer service must be maintained to all house connections.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

- A. Refer to "Louisiana Uniform Public Work Bid Form".
- B. Payment shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labors, operations, and incidentals appurtenant to complete the work being described, as necessary to complete the various items of the work all in accordance with the requirement of the Contract Documents, including all costs of compliance with the regulations of public agencies having jurisdiction. The Contractor is hereby on notice that no separate payment will be made for any item not specifically called out, but that is required to properly complete the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

PART 4 - MEASUREMENT AND PAYMENT

4.01 GENERAL

The total Bid Price shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, sheeting, bracing, bedding, backfill equipment, supplies, and appurtenances; providing all construction equipment, and tools; performing all necessary labor and supervision to fully complete the work, shall be included in the lump sum bid price.

4.02 MEASUREMENT AND PAYMENT

The bid price for each bid item shall include all tools, equipment, supplies, and manufactured articles, and for all labors, operations, and incidentals appurtenant to complete the work as shown in the drawings and detailed in the contract documents. Prior to beginning construction, the Contractor shall provide a detailed itemized cost breakdown to be used for processing monthly payment applications.

4.03 MOBILIZATION & DEMOBILIZATION

All costs associated with mobilization and demobilization of the Contractor's operations, equipment, all items stated in paragraph 4.01 General, personnel, and those of his Subcontractors and other such costs as may be denoted in the Contract Documents for the project area shall be paid at the lump sum price for "MOBILIZATION & DEMOBILIZATION" in the Bid Schedule.

- (1) A maximum of sixty percent (60%) of the lump sum price of this bid item shall be paid upon completion of the Contractor's mobilization at the work site.
- (2) The remaining forty percent (40%) of the lump sum price of this bid item shall be paid upon completion of site clean-up and Contractor's demobilization from the site.

4.04 CONSTRUCTION LAYOUT

All costs connected with furnishing all labor, equipment and materials for performing all operations for construction layout at the site, video and photographic documents, construction surveys and staking, and other such costs as may be denoted in the Contract Documents for the project area shall be paid at the lump sum price for "CONSTRUCTION LAYOUT" in the Bid Schedule.

Construction Layout Payment Schedule

Percent of Total Contract Amount Earned	Allowable Percent of the Lump Sum Price for Construction Layout
1st Partial Estimate	10
50	50
75	75
100	100

4.05 TRAFFIC CONTROL

All costs connected with furnishing all signs, labor, equipment and materials for performing all operations of traffic control for the project shall be paid at the lump sum price for "TRAFFIC CONTROL" in the Bid Schedule.

Traffic Control Payment Schedule

Percent of Total Contract Amount Earned	Allowable Percent of the Lump Sum Price for Construction Layout
1st Partial Estimate	10
50	50
75	75
100	100

4.06 REMOVE AND REPLACE CONCRETE DRIVES

Measurement for removal of concrete drives shall be made per square yard as shown on the Plans. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.07 8" GATE VALVE (MUELLER OR APPROVED EQUAL)

Measurement for gate valves shall be made per each for acquisition and complete installation of materials as shown on the Plans. Gate valves shall be manufactured by the Mueller Company, or an Owner approved equal. Excavation, geo-synthetic fabrics, pipe bedding, pipe backfill, thrust blocking, restraints, mega-lug glands and other materials required for installing tapping sleeves and valves shall be incidental. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.08 WATER METER BOX, SINGLE AND DOUBLE

Measurement for water meter boxes shall be made per each for acquisition and complete installation of materials as shown on the Plans. Excavation, geo-synthetic fabrics, bedding, backfill, and other materials required for installing the water meter boxes shall be incidental. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.09 8" AND 10" WATER MAIN, HDPE DR-11 (OPEN CUT)

Measurement for 8" and 10" diameter water main (HDPE) shall be made per linear foot for acquisition and complete installation of materials as shown on the Plans. Excavation, geo-synthetic fabrics, pipe bedding, pipe fusible fittings, HDPE to PVC adaptors, backfill and other materials required for installing the water main using open-cut method shall be incidental to the new 8" and 10" diameter water main. Joint restraints and transitional fittings shall also be incidental to the new 8" and 10" diameter water main. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.10 10" WATER MAIN, HDPE DR-11 (DIRECTIONAL BORE)

Measurement for 10" diameter water main (HDPE) shall be made per linear foot for acquisition and complete installation of materials as shown on the Plans. Excavation, casings, fusible fitting, HDPE to PVC adaptors, backfill and other materials required for installing the water main using directional boring methods shall be incidental to the new 10" diameter water main. Joint restraints and transitional fittings shall also be incidental to the new 10" diameter water main. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.11 FLUSH VALVE

Measurement for flush valve shall be made per each for acquisition and installation of materials required to complete the work as specified in the Plans and Specifications. All piping/tubing, service saddles, valves and corps stop shall be incidental to the blow-off hydrant. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.12 BACKFLOW PREVENTION DEVICE, 2" (RPZ TYPE BY WATTS OR APPROVED EQUAL)

Measurement for 2" reduce pressure zone valve, backflow prevention device shall be made per each for acquisition and installation of materials required to complete the work as specified in the Plans and Specifications. All piping/tubing, service saddles, valves and corps stop shall be incidental to the backflow prevention device. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.13 AUTOMATIC FLUSHING STATION (HYDRO-GUARD BY MUELLER OR APPROVED EQUAL)

Measurement for automatic flushing equipment shall be made per each for acquisition and installation of materials required to complete the work as specified in the Plans and Specifications. All piping/tubing, service saddles, valves and corps stop shall be incidental to the automatic flushing equipment. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.14 FIRE HYDRANTS (MUELLER SUPER CENTURION 250 HS OR APPROVED EQUAL)

Measurement for fire hydrants shall be made per each for acquisition and complete installation of materials as shown on the Plans. Fire hydrant shall be manufactured by the Mueller Company, or an Owner approved equal. Excavation, piping for the fire hydrant lead, geo-synthetic fabrics, pipe bedding, pipe backfill, thrust blocking and other materials required for installing new fire hydrant(s) shall be incidental. The six-inch (6") isolation gate valve and the adjustable cast iron valve box shown in the fire hydrant standard detail shall also be incidental to all new fire hydrants. The gate valve shall be manufactured by Mueller, or an Owner approved equal. The valve box shall be manufactured by East Jordan Iron Works or Owner approved equal. Payment shall constitute full compensation for the furnishing of all materials, equipment, tools, labor and incidental items required to complete the item in accordance with the Plans and Specifications.

4.15 WATER DISTRIBUTION SYSTEM PIPING, OPEN CUT, BORE, AND DIRECTIONALLY DRILLED

Method of Measurement: Service line will be measured by the linear foot of pipe placed, tested, sterilized, and accepted without deductions for the space occupied by the valves or fittings. Measurement for any section of the pipe will be the actual centerline measurement from the centerline of cross lines or reducer fittings, or between either, and stub end of line being measured.

Basis of Payment: Service line placed and accepted, measured as provided above, will be paid for a the contract unit price per linear foot for water pipe of the various sizes, types and classifications, which price and payment shall constitute full compensation for furnishing, hauling, installing complete, testing and sterilizing the pipe for excavation, preparation of bed and backfilling, compaction and removing surplus earth and for the furnishing of all fittings, thrust blocks, equipment, and labor and incidentals necessary to complete the item in accordance with Plans and Specifications. Payment will include any fittings required on 3" and smaller water main.

END OF SECTION

SECTION 01026

SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 GENERAL

This Section defines the process whereby the Schedule of Values (lump sum price breakdown) shall be developed. Monthly progress payment amounts shall be determined from monthly progress updates of the Schedule activities.

1.02 SCHEDULE OF VALUES

- A. The Contractor shall submit a Schedule of Values for all lump sum price items within 10 days from the date of Notice to Proceed. The listing shall include a price allocation for the major Work components.
- B. The Contractor shall assign the price of work (a sum including allocation for materials, labor, equipment, overhead and profit) to each activity. Price per activity shall not exceed \$30,000.00. Activities shall be grouped to identify the major work item to be performed. The sum of values for all activities listed shall equal the total Contract Lump Sum Price. The Contractor shall provide to the Engineer upon request, the Contractor's backup price information, including unit prices for excavation, backfill, concrete etc. Determining the total percentage of each activity installed for the month will develop the monthly progress payment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01041

PROJECT COORDINATION

PART 1 – GENERAL

1.01 SCOPE

This section covers the work required by the Contractor to coordinate and administer the project.

1.02 PROJECT COORDINATION

- A. Contractor shall plan, schedule and coordinate with the Owner and Engineer all work to be performed on utilities and road closures in a manner conducive to timely and efficient progress in the execution of the contract.
- B. Contractor shall coordinate with all utilities for permanent relocation(s), temporary relocations, new required facilities, new required service, facility upgrades and/or service upgrades.

1.03 NOTICES TO OWNERS AND AUTHORITIES

- A. Contractor shall, as provided in General Conditions, notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- B. When it is necessary to temporarily deny access by owners or tenants to their property, or when any utility service connection must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices will conform to any applicable local ordinance and, whether delivered in writing, will include appropriate information concerning the interruption and instructions on how to limit their inconvenience.
- C. All utilities and other concerned agencies shall be contacted at least 24 hours in advance, unless otherwise specified, prior to cutting or closing streets or other traffic areas, excavating near underground utilities or pole lines or temporary shutdown of existing facilities.
 - 1. Notice to CLECO and/or Washington-St. Tammany Electric Co-op (WST). The Contractor shall review, prior to bidding, with CLECO and/or WST the construction methods to be used in the vicinity of power lines. This review shall establish which lines, if any, need temporary relocation or de-energizing and the cost to accomplish this work. At least two weeks notice is required from the Contractor by CLECO and/or WST prior to any temporary relocating or de-energizing work being required.

2. Notice to Gas Companies. The Contractor shall review with the Gas Company any work to be done in the vicinity of gas lines. Where temporary exposure or complete relocation of gas lines is required the Contractor shall meet with the Gas Company as soon as possible, but no less than thirty (30) days in advance of when work is required.
3. Notice to City and Parish Utilities. The Contractor shall review with the Tammany Utilities any work in the vicinity of existing water and sewer utilities and with the Department of Public Works concerning work in the vicinity of existing drain lines.
4. Contractor shall also coordinate and notify work in the vicinity of telephone and cable lines with AT&T and Charter/Spectrum Cable Company.
5. Notice to Tammany Utilities regarding. A one week notice is required for planning and coordinating a future active facility tie-in(s) and other work. Prior to the scheduled tie-in or work activity, a 72 hour notice will be required for any active facility shutdown(s) that will be required for all active force main or facility tie-in purposes. The Contractor shall anticipate this work being performed after normal working hours and shall be dependent of the number of facilities that require shut down(s) prior to commencing work. No destructive work shall proceed on an active facility until given approval and clearance by Tammany Utilities. The contractor shall have ample personnel, equipment, procedures and material readily available to accomplish the pre-approved task within the agreed upon duration.
6. The contractor shall coordinate all requests through Tammany Utilities for use of St. Tammany Parish Government facilities, materials or resources. The approval of all requests shall be solely at the discretion of the St. Tammany Parish Government. Direct coordination with St. Tammany Parish Government personnel will only be allowed during emergency situations. St. Tammany Parish Government and Tammany Utilities shall not be held responsible for any additional cost or delays as a result of a request denial, approval, or a failure to coordinate a request through the Tammany Utilities.

PART 2 — PRODUCTS (NOT USED)

PART 3 — EXECUTION (NOT USED)

END OF SECTION

SECTION 01043

JOB SITE ADMINISTRATION

PART 1 - GENERAL

1.01 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the site used by him, and all subcontractors in the performance of the Work. He will exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to Owner or others. Contractor has the right to exclude from the site all persons who have no purpose related to the Work or its inspection, and may require all persons on the site to observe the same safety regulation as he required of his employees. At all working hours a superintendent shall be at the job on a full-time basis.

1.02 UNFAVORABLE CONSTRUCTION CONDITIONS

Contractor shall confine his operations to work which will not be affected adversely by unfavorable weather, wet ground, or other unsuitable construction conditions. No portion of the Work shall proceed under conditions which would affect adversely the quality or efficiency of the Work, unless suitable special precautions or countermeasures are taken by Contractor.

1.03 LAND FOR CONSTRUCTION PURPOSES

- A. Contractor will be permitted to use available land belonging to Owner, on or near the site of the Work, for construction purposes and for the storage of materials and equipment. The location and extent of the areas so used shall be as indicated on the drawings or as directed by the Engineer. Contractor shall immediately move stored material or equipment if any occasion arises, as determined by Owner, requiring access to the storage area. Materials or equipment shall not be placed on the property of Owner until Owner has agreed to the location to be used for storage.
- B. It shall be the Contractor's responsibility to provide arrangements for additional land required for construction or for location of the Resident Project Representative's office if applicable beyond that furnished by the Owner. This work shall be considered a subsidiary obligation of the contractor and all costs in connection therewith shall be included in the lump sum price for the applicable item.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01045

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions of the work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirements of Contract Documents.

1.02 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work
- B. Section 01046: Modifications to Existing Piping
- C. Section 01600: Material and Equipment
- D. Section 02220: Excavation, Backfill, Fill and Grading for Structures

1.03 SUBMITTALS

- A. Submit a written request to Engineer well in advance of executing any cutting or alteration which affects:
 - 1. Work of the owner or any separate contractor.
 - 2. Structural value or integrity of any element of the project.
- B. Request shall include:
 - 1. Identification of the project.
 - 2. Description of affected work.
 - 3. The necessity for cutting, alteration or excavation.
 - 4. Effect on work of Owner or any separate contractor, or on structural or weatherproof integrity of project.
 - 5. Description of proposed work.
 - 6. Alternatives to cutting and patching.
 - 7. Cost proposal, when applicable.
 - 8. Written permission of any separate contractor whose work will be affected.

- C. Should conditions of work or the schedule indicate a change of products from original installation, Contractor shall submit request for substitution as specified in Section 01600.
- D. Submit written notice to Engineer designating the date and the time the work will be uncovered.

PART 2 - PRODUCTS

2.01 MATERIALS

Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions to Engineer in writing; do not proceed with work until Engineer has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary for structural value or integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of project from damage.
- C. Provide protection from elements for that portion of the project which may be exposed by cutting and patching work, and maintain excavations free from water.

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.

- C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- D. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract Documents.
- E. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

END OF SECTION

SECTION 01046

MODIFICATIONS TO EXISTING PIPING

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment, and incidentals required to modify, alter and convert existing structures and piping as shown or specified and as required for the installation of new piping and appurtenances.

1.02 RELATED WORK

- A. General and Supplementary Conditions of the contract.
- B. Section 01045: Cutting and Patching.
- C. Section 03300: Cast-in-Place Concrete.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

- A. Prior to commencement of any work modifying existing structures, piping and equipment, an inspection shall be made by the Contractor and Engineer to determine if any existing piping or valves to be left in place are structurally and mechanically sound and in good working order. If it is determined that replacement is required, the items shall be replaced in accordance with the specifications.
- B. Where necessary or required for the purpose of making connections, the Contractor shall cut existing pipe lines in a manner to provide an approved joint. Where required, he shall weld bends, install flanges, or provide approved couplings, all as required.
- C. The Contractor shall provide flumes, hoses, piping, etc. to divert or provide suitable plugs, bulkheads, or other means to hold back the flow of wastewater, water, or other liquids, all as required in the performance of the work under this contract.

END OF SECTION

SECTION 01050

FIELD ENGINEERING AND SURVEYING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor shall provide and pay for field engineering and field surveying services required for the project.

- A. Survey work required in execution of the project.
- B. Civil, structural or other professional engineering services specified, or required to execute the Contractor's construction methods.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Section 01010: Summary of Work.

1.03 QUALIFICATIONS OF SURVEYOR OR ENGINEER

Registered professional engineer of the discipline or registered land surveyor required for the specific service on the project, licensed in the State of Louisiana, acceptable to the owner.

1.04 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the project are those designated on the drawings.
- B. Locate and protect control points prior to starting work, and preserve all permanent reference points during construction.
 - 1. Make no changes or relocations without prior written notice to the Engineer.
 - 2. Report to the Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - 3. Require surveyor to replace project control points which may be lost or destroyed.
 - a. Establish replacements based on original survey control.

1.05 PROJECT SURVEY REQUIREMENTS

- A. Establish temporary bench marks as needed, referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrumentation and similar appropriate means.
- C. From time to time, verify layouts by same methods, as directed by the Engineer.

1.06 RECORDS

Maintain a complete, accurate log of all control and survey work as it progresses.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in the Contract Documents to identify reference standards.

1.02 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents or applicable codes establish stricter standards.
- B. Publication Date: The publication in effect on the date of issue of the Contract Documents, except when a specific publication date is specified.

1.03 ABBREVIATIONS, NAMES, AND ADDRESSES OF ORGANIZATIONS

Obtain copies of referenced standards direct from publication source, when needed for proper performance of work, or when required for submittal by the Contract Documents.

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, DC 20001
ACI	American Concrete Institute Box 19150, Reford Station Detroit, MI 48219
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AISC	American Institute of Steel Construction 1221 Avenue of the Americas New York, NY 10020
AISI	American Iron and Steel Institute 1000 16th Street, N.W.

Washington, DC 20036

ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
ASHRAE	American Society of Heating, Refrigerating and Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 W. Quincy Avenue, Denver, CO 80235
AWS	American Welding Society 2501 NW 7th Street Miami, FL 33125
CRSI	Concrete Reinforcing Steel Institute 180 North LaSalle Street, Suite 2110 Chicago, IL 60601
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Building 197 Washington, DC 20407
MLSFA	Metal Lath/Steel Framing Association 221 North LaSalle Street Chicago, IL 60601
NAAMM	National Association of Architectural Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601

NEMA	National Electrical Manufacturers' Association 2101 L Street, N.W. Washington, DC 20037
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 20076
PCI	Prestressed Concrete Institute 20 North Wacker Drive Chicago, IL 60606
SDI	Steel Door Institute 712 Lakewood Center North Cleveland, OH44107
SMACNA	Sheet Metal and Air Conditioning Contractors" National Association 8224 Old Court House Road Vienna, VA 22180
SSPC	Steel Structures Painting Council 4400 Fifth Avenue Pittsburg, PA
UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01152

REQUESTS FOR PAYMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Submit applications for payment to the Engineer in accord with the schedule established by Conditions of the Contract.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Agreement between owner and Contractor: Lump-Sum.
- B. Conditions of the Contract: Progress Payments, Retainages and Final Payment.
- C. Section 01380: Construction Photographs and Video Taping.
- D. Section 01700: Contract Closeout.

1.03 FORMAT AND DATA REQUIRED

- A. Submit payment requests in the form required by owner with itemized data typed on 8 ½ x 11 white paper continuation sheets.
- B. Provide itemized data on continuation sheet: format, schedules, line items and values.

1.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. All payment requests must be accompanied by a completed pay request checklist and must include a signed affidavit regarding previous payments received, a short progress narrative describing work performed since previous payment submittal, progress photos as per Section 01380, current project schedule and invoices for any stored materials billed. The pay request checklist form shall be as provided on page 01152-3. All items required on the checklist must be included with each pay request for the request to be considered.
- B. When the Owner or the Engineer requires additional substantiating data, the Contractor shall submit suitable information, with a cover letter.
- C. Submit one copy of all data required with a cover letter for each monthly pay request. Any additional substantiating data requested shall also be submitted as required in Part B above.

1.05 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting as specified in section 01700 - Contract Closeout.

1.06 SUBMITTAL PROCEDURE

- A. Submit applications for payment to the Engineer at the times stipulated in the Agreement.
- B. Number: One original and three copies of each application package.
- C. When the Engineer finds application properly completed and correct, he will transmit certificate for payment to the owner, with copy to Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

PAY REQUEST CHECKLIST
(CONSTRUCTION CONTRACT)

PARTIAL PAY REQUEST:

- Pre-Construction Video (Date Submitted): _____
- Construction Schedule (Updated as needed) _____
- Progress Narrative _____
- Schedule of Values _____
- Affidavit Re: Previous Payments _____
- Progress Photos _____
- List of Stored Materials Billed _____
- Invoice for Stored Materials Billed _____
- Insurance for (off Site) _____
- Stored Materials Billed _____

FINAL PAY REQUEST:

- Application for Payment _____
- w/Final Statement of Accounts _____
- Punch List (checked off) _____
- O & M Manuals (Date Submitted) _____
- Record Drawings (Date Submitted) _____
- Spare Parts Lists _____
- Receipt for Material _____
- (Spare Parts) Delivered _____
- To Owner _____
- Clear L & P Certificate _____
- Warranties & Bonds _____
- Consent of Surety to Final Payment _____
- Letter from Contractor stating that _____
- he shall warranty the work for _____
- one year following date of _____
- Substantial Completion _____
- Verification of Bond to Remain in _____
- effect for one year from Final _____
- Payment _____

END OF SECTION

SECTION 01153

CHANGE ORDER PROCEDURES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Promptly implement change order procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time-and-material/force account basis.
 - 3. Provide full documentation to Engineer on request.
- B. Designate in writing the member of Contractor's organization.
 - 1. Who is authorized to accept changes in the Work.
 - 2. Who is responsible for informing others in the contractors employ of the authorization of changes in the Work.
- C. Owner will designate in writing the person who is authorized to execute Change Orders.

1.02 DEFINITIONS

Change order: See General Conditions.

1.03 PRELIMINARY PROCEDURES

- A. Owner or Engineer may initiate changes by submitting a Proposal Request to Contractor. Request will include:
 - 1. Detailed description of the Change, Products, and location of the change in the Project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The projected time span for making the change, and a specific statement as to whether overtime work is, or is not, authorized.
 - 4. A specific period of time during which the requested price will be considered valid.
 - 5. Such request is for information only, and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to Engineer, containing:

1. Description of the proposed changes.
2. Statement of the reason for making the changes.
3. Statement of the effect on the Contract Sum and the Contract Time.
4. Statement of the effect on the work of separate contractors.
5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.04 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Engineer to evaluate the quotation.
- B. On request, provide additional data to support time and cost computations:
 1. Labor required.
 2. Equipment required.
 3. Products required.
 - a. Recommended source of purchase and unit cost.
 - b. Quantities required.
 4. Taxes, insurance and bonds.
 5. Credit for work deleted from Contract, similarly documented.
 6. Overhead and profit.
 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs, and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal, plus additional information.
 1. Name of the Owner's authorized agent who ordered the work, and date of the order.
 2. Dates and times work was performed, and by whom.
 3. Time record, summary of hours worked, and hourly rates paid.
 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing of quantities.
 - c. Subcontracts.

1.05 PREPARATION OF CHANGE ORDERS

- A. Engineer will prepare each Change Order.
- B. Form: Owner's Form, to be provided to the Contractor.
- C. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.

D. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

1.06 LUMP SUM/FIXED PRICE CHANGE ORDER

A. Content of Change Orders will be based on, either:

1. Engineer's Proposal Request and contractor's responsive Proposal as mutually agreed between Owner and Contractor.
2. Contractor's Proposal for a change, as recommended by Engineer.

B. Owner and Engineer will sign and date the Change Order as authorization for the Contractor to proceed with the changes.

C. Contractor may sign and date the Change Order to indicate agreement with the terms therein.

D. Contractor and Subcontractors Overhead and Profit shall not exceed 15% on Direct Cost. Prime Contractor mark-up of subcontractors direct cost shall not exceed 10%. Performance and Payment Bond Shall not exceed 1% of Change Order sub-total.

E. Utilization of the St. Tammany Parish Government Construction Contract Change Order Form shall be required. St. Tammany Parish Government Construction Contract Change Order Form is included at the end of this specification.

1.07 UNIT PRICE CHANGE ORDER

A. Content of Change Orders will be based on, either:

1. Engineer's definition of the scope of the required changes.
2. Contractor's Proposal for a change, as recommended by Engineers.
3. Survey of completed work.

B. The amounts of the unit prices to be:

1. Those stated in the Agreement.
2. Those mutually agreed upon between Owner and Contractor.

C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:

1. Owner and Engineer will sign and date the Change Order as authorization for Contractor to proceed with the changes.
2. Contractor may sign and date the Change Order to indicate agreement with the terms therein.

- D. When quantities of the items cannot be determined prior to start of the work:
1. Engineer or Owner will issue a construction change authorization directing Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.
 2. At completion of the change, Engineer will determine the cost of such work based on the unit prices and quantities used.
 - a. Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
 3. Engineer will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
 4. Owner and contractor will sign and date the change Order to indicate their agreement with the terms therein.
 5. Unit Price Change Orders shall not be allowed Profit and Overhead.

1.08 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Application for Payment forms to record each change as a separate item of work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time.
 1. Revise subschedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 ST. TAMMANY PARISH GOVERNMENT CONSTRUCTION CONTRACT CHANGE ORDER FORM

- A. Contractor shall be required to utilize the attached change order form for all additional contract work proposals.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Engineer shall schedule and administer pre-construction meeting, periodic progress meetings, and specially called meetings throughout progress of the work. At a minimum, he shall perform the following duties:
1. Prepare agenda for meetings.
 2. Distribute written notice of each meeting four days in advance of meeting date.
 3. Make physical arrangements for meetings.
 4. Preside at meetings.
 5. Record the minutes; include significant proceedings and decisions.
 6. Reproduce and distribute copies of minutes within three days after each meeting.
 - a. To participants in the meeting
 - b. To parties affected by decisions made at the meeting
- B. Representative of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.02 RELATED REQUIREMENTS

- A. Instructions to Bidders: Pre-bid Conferences.
B. Section 01340: Shop Drawings, Product Data and Samples.

1.03 PRE-CONSTRUCTION MEETING

- A. Schedule prior to issuance of Notice to Proceed.
B. Location: A central site, convenient for all parties, designated by the Engineer.
C. Attendance:
 1. Owner's Representative.
 2. Engineer and his professional consultants.
 3. Resident Project Representative.
 4. Contractor's Superintendent.
 5. Major Subcontractors.
 6. Major suppliers.
 7. Others as appropriate.

D. Suggested Agenda:

1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected Construction Schedules.
 - c. Values for progress payment purposes.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project Coordination:

Designation of responsible personnel.
5. Procedures and processing of:
 - a. Field decisions.
 - b. Proposal requests.
 - c. Submittals.
 - d. Change Orders.
 - e. Applications for Payment.
6. Adequacy of distribution of Contract Documents.
7. Procedures for maintaining Record Documents.
8. Use of premises:
 - a. Office, work and storage areas.
 - b. Owner's requirements.
9. Construction facilities, controls and construction aids.
10. Temporary utilities.
11. Safety and first-aid procedures.
12. Security procedures.
13. Housekeeping procedures.

1.04 PROGRESS MEETINGS

- A. Schedule regular monthly meetings.
- B. Hold called meetings to review progress of the work.
- C. Location of the meetings: As designated by the Engineer.
- D. Attendance:
 1. Engineer, and his professional consultants, as needed.
 2. Contractor.
 3. Subcontractors, as appropriate to the agenda.

4. Suppliers, as appropriate to the agenda.
5. Others.

E. Suggested Agenda:

1. Review, approval of minutes of previous meeting.
2. Review of work progress since previous meeting.
3. Field observations, problems, conflicts.
4. Problems which impede Construction Schedule.
5. Review of off-site fabrication, delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Revisions to Construction Schedule.
8. Progress, schedule, during succeeding work period.
9. Coordination of schedules.
10. Review submittal schedules; expedite as required.
11. Maintenance of quality standards.
12. Pending changes and substitutions.
13. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the project.
14. Other business.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULING

PART 1 – GENERAL

1.01 PROGRAM DESCRIPTION

- A. A Critical Path Method (CPM) construction schedule shall be used to control the work of this Contract and to provide a definitive basis for determining job progress. The construction schedule shall be prepared, maintained, and updated by the Contractor. The construction schedule shall be reviewed by the Engineer as described herein. All work shall be done in accordance with the established CPM schedule and the Contractor and his/her subcontractors shall be responsible for cooperating fully with the Engineer and the Owner in effectively utilizing the CPM schedule. It is suggested that Primavera Project Planner, Version 1.0 (or latest) for Windows shall be the software used for the CPM construction schedule.
- B. The CPM schedule to be prepared and submitted by the Contractor shall consist of a CPM network (diagram of activities) in the Time Scale Logic and a computer-generated schedule (print-out) as specified herein.
- C. Within ten calendar days following written Notice to Proceed, the Contractor shall submit to the Engineer for review and approval a Preliminary Guideline CPM Schedule covering the first 60 calendar days of Work to be performed.
- D. The Preliminary Guideline CPM Schedule shall:
 - 1. Illustrate a feasible CPM schedule for completion of the work under this Contract within the time specified.
 - 2. Provide an elementary example of a CPM schedule in the format to be used for the detailed CPM schedule specified. The Preliminary Guideline CPM Schedule is not as detailed as the CPM schedule required under this Contract.
 - 3. Establish mandatory milestone dates. Designate milestones on the Preliminary Guideline CPM Schedule with asterisks.
- E. The Preliminary Guideline CPM Schedule is not to be considered binding except for the time required for contract completion and the mandatory milestones.
- F. Contractor shall develop his own outline of the Work and prepare his proposed CPM schedule. The computer-based schedule shall be the product of a recognized commercial computer software producer and shall meet all of the requirements

defined herein.

1.02 QUALIFICATIONS

- A. Have the capability of preparing and utilizing the specified CPM scheduling technique. A statement of CPM capability shall be submitted in writing to the Engineer within ten calendar days after the award of the Contract and will verify that either the Contractor's organization has in-house capability qualified to use the technique or that the Contractor employs a consultant who is so qualified. Capability shall be verified by description of the construction projects to which the Contractor or his/her consultant has successfully applied the CPM scheduling technique and which were controlled throughout the duration of the project by means of systematic use and updating of a computer-based CPM schedule. The submittal shall include the name of the individual on the Contractor's staff who will be responsible for the CPM schedule and for providing the required updating information.

1.03 NETWORK REQUIREMENTS

- A. The network shall show the order and inter-dependence of activities and the sequence in which the work is to be accomplished as planned by the Contractor. The basic concept of a network analysis diagram shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and its completion restricts the start of following activities.
- B. Detailed network activities shall include: construction activities, the submittal and approval of samples of materials and shop drawings, the procurement of materials and equipment, fabrication of materials and equipment and their delivery, installation and testing, start-up and training. Break the work into activities with duration no longer than 20 working days each, except as to non-construction activities (such as procurement of materials and delivery of equipment) and any other activities for which the Engineer may approve the showing of longer duration. To the extent feasible, activities related to a specific physical area of the work shall be grouped on the network for ease of understanding and simplification.
- C. Separate activities shall be provided for each significant identifiable function in each trade area in each facility. Activities shall be so identified that there will be no reasonable doubt as to how much work remains on each. Specific activities which shall be included are: all sub contract work, all interface work between subcontractors and between the Contractor and subcontractors leakage tests of tanks and pipelines, electrical connections to each item of equipment, supplier and manufacturer technical assistance, mechanical connections to each item of equipment all tests concrete finishing, each item of site work, (including restraints on other activities) and all utilities, fuels and chemicals.

- D. Each activity on the network shall have the following indicated on the node representing it.
1. A single duration (i.e., the single best estimate of elapsed time considering the scope of the work involved in the activity and the resources planned for accomplishing the activity) expressed in working days.
 2. A five character (or less) code indicative of the party responsible for accomplishing the activity.
 3. A cost estimate for each activity which, when accumulated with the cost of all activities, equals the total contract cost. Estimated overhead and profit shall be prorated throughout all activities. Materials costs shall be assigned to delivery activities.
 4. A brief description of the activity.
 5. Manpower estimate for each activity.
- E. The selection and number of activities shall be subject to the Engineer's approval. The detailed network shall be time scaled. In addition to the brief description, submit a separate list of all activities containing a detailed narrative of the scope of each activity, including the trades and subcontractors involved, the activity duration, and the cost of each activity as it pertains to the pay items on the Schedule of Values.
- F. To the extent that the network or any revision thereof shows anything not jointly agreed upon or fails to show anything jointly agreed upon, it shall not be deemed to have been approved by the Engineer. Failure to include on a network any element of work required for the performance of this Contract shall not excuse the Contractor from completing all work required within any applicable completion date, notwithstanding the review of the network by the Engineer.
- G. Except where earlier completions are specified, CPM schedules which show completion of all work prior to the contractor completion date may be approved by the Engineer but in no event shall they be acceptable as a basis for claim for delay against the Owner or Engineer by the Contractor.

1.04 COMPUTER-GENERATED SCHEDULE REQUIREMENTS

- A. Each computer-generated schedule submittal from the CPM activity network shall include the following tabulations: a list of activities in numerical order, a list of activity precedence's, a schedule sequenced by Early Start Date and a schedule sequenced by Total Float. Each schedule shall include the following minimum items:

1. Activity numbers
 2. Estimated duration
 3. Activity description
 4. Early start date (calendar dated)
 5. Early finish date (calendar dated)
 6. Latest allowable start date (calendar dated)
 7. Latest allowable finish date (calendar dated)
 8. Status (whether critical)
 9. Estimated cost of the activity
 10. Total float and free float
- B. In addition, each schedule shall be prefaced with the following summary data:
1. Contract name and number
 2. Contractor's name
 3. Contract duration
 4. Contract schedule
 5. The effective or starting date of the schedule (the date indicated in the Notice to Proceed).
- C. The work day to calendar date correlation shall be based on an 8-hour day and 40-hour week with adequate allowance for holidays, adverse weather and all other special requirements of the work.

1.05 INITIAL CONFERENCE

- A. Within ten days following the receipt of the Notice to Proceed, meet with the Engineer to discuss and agree on the proposed standards for the CPM schedule. At this conference submit to the Engineer a preliminary network defining the planned operations during the first 60 calendar days after Notice to Proceed. The general approach for the balance of the project shall be indicated. Cost of activities expected to be completed or partially completed before submission and approval of the complete network shall be included.

1.06 APPROVED CPM SCHEDULE

- A. Within 45 days following the receipt of the Notice to Proceed, submit two prints of the proposed CPM activity network and a computer-generated schedule to the Engineer. Following review by the Engineer and Owner, the Contractor shall incorporate the Engineer's comments into the network and submit five prints and two reproducible of the revised network and two copies of the computer-generated schedule. This final submittal shall be delivered to the Engineer within 60 days after the Notice to Proceed.
- B. CPM schedules which contain activities showing negative float or which extend beyond the contract completion date in the computer-generated schedule will not be approved.
- C. The Contractor shall participate in the initial review and evaluation of the proposed network diagram and schedule by the Engineer. The approved network shall then be approved CPM schedule to be used for planning, organizing and directing the work, and reporting progress.
- D. Approval of the CPM activity network by the Engineer is advisory only and shall not relieve the Contractor of responsibility for accomplishing the work within the contract completion date. Omissions and errors in the approved CPM schedule shall not excuse performance less than that required by the Contract Approval by the Engineer in no way makes the Engineer an insurer of the CPM schedule's success or liable for time or cost overruns flowing from its shortcomings. The Owner hereby disclaims any obligation or liability by reason of approval by its agent, the Engineer, of the CPM schedule.
- E. The CPM activity network shall be prepared in accordance with the format used in the Preliminary Guideline CPM Schedule noted above. The network shall be submitted on sheets 24-in by 36-in and may be divided into as many separate sheets as required.

1.07 PROGRESS REPORTING

- A. Progress under the approved CPM schedule shall be evaluated monthly by the Contractor and the Engineer. Not less than seven days prior to each monthly progress meeting, they shall meet at the job-site and jointly evaluate the status of each activity on which work has started or is due to start, based on the preceding CPM schedule; to show actual progress, to identify those activities started and those completed during the previous period, to show the estimated time required to complete or the percent complete of each activity started but not yet completed and to reflect any changes indicated for the network. Activities shall not be considered to be complete until they are, in fact, 100 percent complete.

- B. At each progress meeting, submit a narrative report based on the CPM schedule evaluation described above, in a format agreed upon by the Contractor and the Engineer. The report shall include a description of the progress during the previous period in terms of completed activities, and explanation of each activity which is showing a delay, a description of problem areas, current and anticipated delaying factors and their estimated impact on performance of other activities and completion dates and an explanation of corrective action taken or proposed. This report, as well as the CPM Status Report, will be discussed at each progress meeting.

1.08 RESPONSIBILITY FOR SCHEDULE COMPLIANCE

- A. Whenever it becomes apparent from the current CPM schedule and CPM Status Report that delays to the critical path have resulted and the contract completion date will not be met, or when so directed by the Engineer, Contractor shall take some or all of the following actions at no additional cost to the Owner. He shall submit to the Engineer for approval, a written statement of the steps intended to take to remove or arrest the delay to the critical path in the approved schedule.
 1. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of work.
 2. Increase the number of working hours per shift, shifts per day, working days per week, the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate the backlog of work.
 3. Reschedule activities to achieve maximum practical concurrence of accomplishment of activities and comply with the revised schedule.
- B. If when so requested by the Engineer, failure to submit a written statement of the steps intended to take or should fail to take such steps as approved by the Engineer, the Engineer may direct the Contractor to increase the level of effort in man-power (trades), equipment and work schedule (overtime, weekend and holiday work, etc) to be employed by the Contractor in order to remove or arrest the delay to the critical path in the approved schedule and the Contractor shall promptly provide such level of effort at no additional cost to the Owner.

1.09 ADJUSTMENT OF CONTRACT SCHEDULE AND COMPLETION TIME

- A. If the Contractor desires to make changes in his/her method of operating which affect the approved CPM schedule, he/she shall notify the Engineer in writing stating what changes are proposed and the reason for the change. If the Engineer approves these changes, the Contractor shall review and submit for approval, without additional cost to the Owner, all of the affected portions of the CPM

network. The CPM schedule shall be adjusted by the Contractor only after prior approval of his/her proposed changes by the Engineer. Adjustments may consist of changing portions of the activity sequence, activity durations, division of approved activities, or other adjustments as maybe approved by the Engineer. The addition of extraneous, non-working activities and activities which add unapproved restraints to the CPM schedule shall not be approved.

- B. If the completion of any activity, whether or not critical, falls more than 100 percent behind its approved duration, submit for approval a schedule adjustment showing each such activity divided into two activities reflection completed versus uncompleted work.
- C. Shop drawings which are not approved on the first submittal or within the schedule time and equipment which do not pass the specified tests shall be immediately rescheduled.
- D. The contract completion time will be adjusted only for causes specified in this Contract. In the event the Contractor requests an extension of any contract completion date, he/she shall furnish such justification and supporting evidence as the Engineer may deem necessary to determine whether the Contractor is entitled to an extension of time under the provisions of this Contract. The Engineer will after receipt of such justification and supporting evidence, make findings offset and will advise the Contractor in writing thereof. If the Engineer finds that the Contractor is entitled to any extension of any contract completion date, the Engineer's determination as to the total number of days extension shall be based upon the currently approved CPM schedule and on all data relevant to the extension. Such data shall be included in the next updating of the schedule. Actual delays in activities which, according to the CPM schedule, do not affect any contract completion date shown by the critical path in the network will not be the basis for a change therein.
- E. Each request for change in any contract completion date shall be submitted by the Contractor to the Engineer within 30 days after the beginning of the delay for which a time extension is requested but before the date of final payment under this Contract. No time extension will be granted for requests which are not submitted within the foregoing time limit.
 - 1. From time to time it may be necessary for the contract schedule or completion time to be adjusted by the Owner to reflect the effects of job conditions, weather, technical difficulties, strikes, unavoidable delays on the part of the Owner or its representatives and other unforeseeable conditions which may indicate schedule adjustments or completion time extensions. Under such conditions, the Engineer will direct the Contractor to reschedule the work or contract completion time to reflect the changed conditions and the Contractor shall revise his/her schedule accordingly. No additional compensation will be made to the Contractor for such

schedule changes except for unavoidable overall contract time extensions beyond the actual completion of all unaffected work, in which case the Contractor shall take all possible action to minimize any time extension and any additional cost to the Owner. Available float time in the CPM schedule may be used by the Owner as defined by the Engineer, as well as by the Contractor.

- F. The Owner controls the float time in the approved CPM network and, therefore, without obligation to extend either the overall completion date or any intermediate completion dates set out in the CPM network, the Owner may initiate changes to the work that absorb float time only. Owner initiated changes that affect the critical path on the approved CPM network shall be the sole grounds for extending (or contracting) said completion dates. Contractor-initiated changes that encroach on the float time identified in the approved CPM network may be accomplished with the Owner's concurrence. Such changes, however, shall give way to Owner-initiated changes competing for the same float time.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01335

SITE CONDITIONS SURVEY

PART 1 - GENERAL

1.01 RELATED WORK

Section 01380: Construction Photography and Video Taping

1.02 DESCRIPTION

- A. Contractor shall conduct a thorough survey of the entire job route. This survey should be adequate as to ascertain pre-construction and post-construction conditions (including elevations) of all public and private property within and adjacent to the construction limits. The Contractor shall provide sufficient video, still photographs, slab elevations and/or written documentation of the project route. Sufficient photographs and video shall be provided by the Contractor and submitted to the Engineer to resolve any damage claims which may arise due to the construction of this project. All videos shall be made in accordance with Section 01380. Elevations on abutting drives and walks shall be taken at approximately 20-foot intervals and at the point of juncture with any structure to which they are attached.
- B. All photographs, video tapes and survey data shall be submitted to the Engineer for record purposes prior to, but not more than seven weeks before, commencement of any construction activities. All videos, photographs, and written records shall become the property of the Owner upon payment for work.
- C. On horizontal directional drilling (HDD) projects, the Contractor shall provide a video inspection of all existing gravity sewer and storm drain lines that the HDD route crosses prior to and upon completion of construction (cleaning of these lines may be required). The pre-construction video must be presented to the Owner, reviewed and accepted prior to commencing construction. If in the opinion of the Owner, any of these lines have been damaged by HDD construction, the Contractor will be required to perform a 16 ft. long "point repair" of the damaged line at no additional cost to the Owner. Cost for pipe inspection shall be absorbed in the project cost.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Submit shop drawings, product data and samples required by Contract Documents.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Definitions and Additional responsibilities of parties.
- B. Designate in a separate schedule, the dates for submission and the dates that reviewed shop drawings, product data and samples will be needed.

1.03 SHOP DRAWINGS

- A. Drawings shall be presented in a clear and thorough manner.
 - 1) Details shall be identified by reference to sheet and detail as shown on contract drawings.
- B. Minimum sheet size: 8 1/2 inches by 11 inches.

1.04 PRODUCT DATA

- A. Preparation
 - 1) Clearly mark each copy to identify pertinent products or models.
 - 2) Show performance characteristics and capacities.
 - 3) Show dimensions and clearances required.
 - 4) Show wiring or piping diagrams and controls.
- B. Manufacturer's standard schematic drawings and diagrams.
 - 1) Modify drawings and diagrams to delete information which is not applicable to the work.
 - 2) Supplement standard information to provide information specifically applicable to the work.

1.05 SAMPLES

- A. Office samples shall be of sufficient size and quantity to clearly illustrate:

- 1) Functional characteristics of the product, with integrally related parts and attachment devices.
- 2) Full range of color, texture and pattern.

1.06 CONTRACTOR RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission.
- B. Determine and verify:
 - 1) Field measurements
 - 2) Field construction criteria
 - 3) Catalog numbers and similar data
 - 4) Conformance with specifications
 - 5) Confirm compatibility of equipment to be supplied within location to be erected.
 - 6.) Confirm and Certify American Iron and Steel Compliance
- C. Coordinate each submittal with requirements of the work and of the contract documents.
- D. Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the contract documents.
- E. Begin no fabrication or work which requires submittals until return of submittals with Engineer approval.

1.07 SUBMISSION REQUIREMENTS

- A. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the work or in the work of any other contractor.
- B. Number of Submittals required:
 - 1) Shop Drawings and Product Data: Submit one (1) set of reproducibles and two (2) sets of prints of each shop drawing submittal for review. After final review in which there are no exceptions noted or referenced the contractor shall furnish the Engineer six (6) complete sets for use by the Engineer and Owner.
 - 2) Samples: Submit the number stated in each specification section.
- C. Submittals shall contain:
 - 1) The date of submission and the dates of any previous submissions.
 - 2) The project title and number.
 - 3) Contract identification.
 - 4) The names of:

- (a) Contractor
- (b) Supplier
- (c) Manufacturer

- 5) Identification of the product, with the specification section number.
- 6) Field dimensions, clearly identified as such.
- 7) Relation to adjacent or critical features of the work or materials.
- 8) Applicable standards, such as ASTM or Federal specification numbers.
- 9) Identification of deviations from Contract Documents
- 10) Manufacturers American Iron and Steel Certification Letter.
- 10) Identification of revisions on resubmittals.
- 11) A blank space for Contractor and Engineer stamps.
- 12) Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of Contract Documents.

- D. Submittals should be made using the Letter of Transmittal form attached to this section as page 01340-6. Submittals received without this submittal form will be returned to the Contractor without action. Transmittals shall be numbered in sequence for each Section of the Specifications. The number after the dash indicates the Section of the Specifications, and the number before the dash is the sequence number of the transmittal (1-15100 would be the first transmittal applicable to Section 15100 of the Specifications. 2-15100 would be the second transmittal for Section 15100, etc.)
- E. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a shop drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor for such charges, unless the need for such change is beyond the control of the Contractor.

1.08 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the Engineer and resubmit until no exceptions are taken by the Engineer.
- B. Shop Drawings and Product Data:
 - 1) Revise initial drawings or data, and resubmit as specified for the initial submittal.
 - 2) Indicate any changes which have been made other than those requested by the Engineer.
- C. Samples: Submit new samples as required for initial submittal.

1.09 DISTRIBUTION

- A. Distribute reproductions of Shop Drawings and copies of Product Data which carry the Engineer review stamp to:
 - 1) Job site file
 - 2) Record Documents file
 - 3) Other affected contractors
 - 4) Subcontractors
 - 5) Supplier or Fabricator
- B. Distribute samples which carry the Engineer review stamp as directed by the Engineer.

1.10 ENGINEER DUTIES

- A. Engineer will provide a timely review of shop drawings and samples in accordance with the schedule of submittals acceptable to the Engineer. Engineers review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation into the work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed project as a functioning whole as indicated by the Contract Documents.
- B. Affix review stamp and initials or signature, and indicate requirements, if any, for resubmittal.
- C. Return submittals to Contractor.

1.11 ENGINEER'S ACTION

- A. Final unrestricted release. Work may proceed, provided it complies with contract documents, when submittal is returned with the following:
 - Marking: No exceptions taken
- B. Final-But-Restricted Release. Work may proceed, provided it complies with notations and corrections on submittal and with contract documents, when submittal is returned with the following:
 - Marking: Revised as Noted.
- C. Returned for Resubmittal. Do not proceed with work. Revise submittal in accordance with notations thereon, and resubmit without delay to obtain a different action marking. Do not allow submittals with the following marking (or unmarked submittals where a marking is required) to be used in connection with performance of the work:
 - Marking: Amend and Resubmit or

Rejected - See Remarks

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

LETTER OF TRANSMITTAL

Transmittal of						<input type="checkbox"/> New Transmittal <input type="checkbox"/> Re-Submittal	
Project: CROSS GATES WATER DISTRIBUTION – HERWIG BLUFF							
TO: St. Tammany Parish Government 620 N Tyler Street Covington, LA 70433						From:	
						Transmittal No.	
						(If Any) Previous Transmittal No.	
Item No.	Description of Item Submitted, i.e., Type, Size, Model No., Etc.	Mfg. or Supplier	Mfg. or Contr. Cat., Curve, Drawing or Brochure No.	No. of Copies	Project Specification Section Number	Engineer's Use Only	
						Action Code	
Signature of Contractor: _____ Date: _____							
(THIS SECTION TO BE USED ONLY BY THE ENGINEER TO DESIGNATE ACTION)							
Action Codes. The following codes are given to the items submitted: A - No exceptions taken; B - Revise as noted; C - Amend and resubmit; D - Rejected. See remarks. Corrections and comments made on the shop drawings during this review do not relieve the contractor from compliance with requirements of the drawings and specifications.							
Enclosure Returned (List by Item No.)						By: _____ St. Tammany Parish Government – Tammany Utilities	
						Date: _____	
Distribution Requested: Contractor _____ Engineer _____ Owner _____							

SECTION 01380

CONSTRUCTION PHOTOGRAPHS AND VIDEOS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor shall employ a competent photographer to take construction record photographs and video DVDs prior to and periodically during course of the work.

1.02 PHOTOGRAPHY REQUIRED

- A. Video Survey as specified herein (pre-construction).
- B. Provide six (6) photographs each month of each major portion of the work taken at each major stage of construction.
- C. Provide digital files of each photograph identified with contract number, description of view and date.

1.03 COSTS OF PHOTOGRAPHY

Contractor shall pay costs for specified video and photography, and prints. Parties requiring additional photography or prints will pay photographer directly.

PART 2 - PRODUCTS

2.01 PRINTS

- A. Color:
 - 1. Paper: 20lb Bond Paper.
 - 2. Print Size: 3 ½ in. x 5 in.
 - 3. Each picture will be date stamped.
 - 3. Prints: 1 column and 2 rows of pictures per sheet.
- B. Identify each print by caption below the picture, listing:
 - 1. Project Subject / Item.
 - 2. Location / Station.
 - 3. Direction of view.

2.02 VIDEOS

- A. Specifications for Audio-Video Survey

Prior to the start of construction of the contract, the Contractor shall furnish to the Engineer the Preconstruction video DVDs that will include the construction areas and other areas as designated by the Project Engineer.

If the project is near any structures, then additional preconstruction video maybe required as directed by the Project Engineer. This will include at a minimum: pavements, sidewalks, yards, driveways, walkways and fronts facades of residences/businesses along the project site. In addition, if properties are near the site, views shall include from behind the curb, the sidewalk and grass areas, driveways and the fronts of the residences. Side and rear views of the exterior of the residence, along with the interior of all structures adjacent to project, shall also be videoed. Interior videos shall run along the corners of each room of the subject structure. Views shall also clearly show any existing damage prior to the commencement of work. The Contractor shall also supply the Engineer with signatures of any resident not allowing the internal/external survey of existing residential structures on an appropriate form.

The Pre Construction DVDs shall be reviewed by the Engineer and either approved or additional coverage will be required to fully show the physical conditions of the work areas. The Contractor shall have the additional coverage videoed and shall not begin work, including moving equipment and/or material on the project site, until the audio-video survey has been approved by the Engineer. After approval, the Contractor shall supply two copies of the audio-video survey to the Engineer. One copy of the DVDs will remain available for viewing by the Contractor and may be reviewed by him for any assistance that the DVDs may provide in resolving disputes which arise with the property owners claiming improper restoration of their properties or Parish owned features and items. The copy of the DVDs will also be used as a guide by the Engineer, prior to issuance of final payments, in determining the adequacy of restoration and the extent of damages attributable to the Contractor's work. The remaining copy of the DVD will be delivered to the Owner.

B. Technical Requirements

The total audio-video recording system and the procedures employed in its use shall be such as to produce a finished product that will fulfill the technical requirements of the project, as well as those more subjective requirements of high-quality audio and video production. The video portion of the recording shall reproduce bright, sharp, clear pictures with accurate colors and shall be free from distortion or any other form of picture imperfection. The audio portion of the recording shall reproduce precise and concise explanatory notes by the camera operator with proper volume, clarity and freedom from distortion.

C. Video Recorder

The recorder shall be DVD format.

D. Camera

The color video camera shall have a horizontal resolution of at least 550 lines at center and 4 megapixels.

PART 3 - EXECUTION

3.01 TECHNIQUE FOR STILL PHOTOGRAPHS

- A. Factual presentation.
- B. Correct exposure and focus.
 - 1. High resolution and sharpness.
 - 2. Maximum depth-of-field.
 - 3. Minimum distortion.

3.02 VIEWS REQUIRED FOR STILL PHOTOGRAPHS

- A. Contractor shall photograph from locations to adequately illustrate conditions of construction and state of progress. Consult with Engineer at each period of photography for instructions concerning views required.
- B. Prior to construction, six photographs of pertinent features shall be taken at various locations at the site as selected by the Engineer and promptly submitted to the Engineer. Additional progress photographs shall be made monthly throughout the progress of the work and of significant milestones items or areas when work has taken place at that location during the month and submitted with each of the Contractor's applications for progress payment.

3.03 TECHNIQUE AND VIEWS REQUIRED FOR VIDEO TAPING

- A. At the start of production, an identification summary shall be read into the record while, at the same time, a wide-angle view with numeric displays shall be provided for a visual record. This summary will include (1) DVD number, (2) job title, (3) job location, (4) positional location at job start, (5) date and time, (6) weather and (7) any other notable conditions.
- B. Coverage

The recording shall include coverage of all surface features located within the construction zone-of-influence. This zone shall be defined as (1) the area within 500 feet of the work site and (2) areas directed by the Owner. The coverage shall be continuous (i.e., the camera shall not be turned off once photography has begun) to the

greatest extent practically possible. If the camera must be turned off then a verbal message shall be inserted stating that the camera will be turned off and the reason for discontinuing coverage.

C. Visibility

No recording shall be done during periods of significant precipitation, mist or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording. Zooming and panning shall be slow and deliberate.

D. Experience

The operator in charge must have had previous experience video documenting a minimum of fifty miles of pre-construction work. Any apprentice operators must be continuously supervised by an above-described experienced operator.

3.04 DELIVERY OF PHOTOGRAPHS AND PRINTS

A. Preconstruction photographs shall be delivered to the Engineer prior to the mobilization of any equipment or materials or the beginning of construction.

B. Digital photographs shall be of at least 4 megapixels and shall be clear, sharp and encompass depth of field. The photographs shall be submitted as a color printed composite PDF, digital PDF file and original digital camera files on a CD/DVD ROM. Two (2) printed colored PDFs on bond paper and (2) CD/DVD ROMS labeled with the Project Title and date shall be furnished with each set of photographs. In addition, any and all digital photographs taken during construction by the contractor shall be retained and a copy of all digital files shall be delivered on CD/DVD ROM to the Owner's Project Engineer at the completion of the project or as directed by the Owners Project Engineer or Representative.

C. Deliver progress prints to Engineer to accompany each Application for Payment.

3.05 DELIVERY OF DVDs

A. Recording Schedule

The recording shall be performed prior to the placement of any construction materials or equipment on the proposed construction site, but not more than seven weeks prior to the placement of materials or equipment.

B. DVD Indexing

All DVDs and their storage cases shall be properly identified by DVD index number, project title and general project location. Displayed on the storage case of each DVD shall be a log of that DVD's contents. That log shall describe (1) the various segments

contained on that DVD, (2) coverage start, direction and endpoints, with corresponding DVD player counter numbers. A cumulative index correlating the various segments of coverage to their corresponding DVDs shall be typed and supplied to the Owner.

C. After approval of videos, deliver two record copies to Engineer.

D. Unacceptable Documentation

The Owner shall have the authority to reject all or any portion of the DVD documentation not conforming to the specifications. Those rejected portions shall be re-taped at no additional cost to the Owner.

E. Specification Deviations

Any deviation from these specifications must have the written approval of the Owner/Engineer.

F. Payment

There will be no separate payment for construction photographs and videos. Payment for the work covered under this section shall be included within the pay item for mobilization and demobilization. Video documentation will be made in accordance with the project specifications.

END OF SECTION

SECTION 01390

EXCAVATION PLAN

PART 1 - GENERAL

1.01 SUBMITTALS

Prior to beginning excavation operations on the project, the Contractor shall submit in writing to the Engineer his proposed plan to comply with the requirements of this section and other applicable sections of the contract documents. The excavation plan shall be stamped and certified by a Professional Engineer registered in the state of Louisiana. Any subsequent deviation from the approved plan or amendments thereto must have the prior approval of the Engineer.

1.02 SAFETY REQUIREMENTS

The methods and operation outlined in the excavation plan shall comply with all local codes and laws, and authorities having jurisdiction.

PART 2 - PRODUCTS

2.01 GEOTECHNICAL REPORTS

The contractor may request any available geotechnical reports, borings or data from the Engineer or Owner prior to bidding. This information shall be subject to the terms outlined in the Instructions to Bidders, Section 6. The Owner, Engineer or their representative shall not be held responsible for variances in supplied data and actual filed conditions.

Prior to bidding, the contractor may request for permission to conduct a soil boring at no cost to the Owner, Engineer or their representatives. This request shall be made in writing to the owner and directed to Project Engineer. The Owner or any Owner designated representative shall not be held responsible for any delays or cost in relation to contractor requested pre-bid soil borings.

PART 3 - EXECUTION

The Contractor shall submit his proposed method of construction which shall include the methods for excavating, protection of existing utilities, dewatering, sheeting, shoring and bracing, and backfilling which he plans on using to perform the work included in the contract documents. A plan is required for the launching and receiving pits for horizontal directional drilling. All braced excavations shall be designed by using the wet soil densities shown on the boring log unless the Contractor can reasonably prove that he can

supply an effective dewatering system which will dry and maintain the soil in a "moist" condition even during periods of wet weather. The plan shall include but not be limited to:

1. Type of major excavation equipment.
2. Sheeting, shoring and bracing plan per Section 02160.
3. Dewatering plan per Section 02140.
4. Hauling equipment, and proposed excavation quantities.
5. Proposed haul routes of excavation and material supply equipment
6. Handling and storage of materials on site.
7. Provisions for compliance with permits and regulations.

The Contractor shall include in his plan a section describing aspects of the project where a modification of the proposed plan will occur due to field conditions. This shall include a detailed explanation of the methods of construction which he plans to use in specific areas or as required by the Engineer. The Contractor shall have the excavation plan stamped and certified by a Professional Engineer registered in the state of Louisiana.

The Contractor shall submit to the Engineer a design of the sheet pile and dewatering systems to be used in the launching and receiving pits for horizontal directional drilling. The design shall also include a detailed plan for the sequence of dewatering operations as related to the progress of the excavation.

The Contractor shall revise his plan when the Contractor's construction operation being used on the project changes materially from the original submittal or as required by the Engineer.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor shall employ and pay for the services of an independent testing laboratory to perform specified testing upon recommendation of the Engineer at no direct pay.

- A. The Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
- B. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the contract.

1.02 RELATED REQUIREMENTS

- A. Conditions of the contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- B. Respective sections of Specifications: Certification of products.

1.03 LABORATORY DUTIES

- A. Cooperate with the Engineer and Contractor to provide certified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specified standards.
 - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify the Engineer and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit two (2) copies of written report of each test and inspection to the Engineer, four (4) copies to the owner and two (2) copies to the Contractor. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather conditions.

7. Date of test.
8. Identification of product and specification section.
9. Location of sample or test in the project.
10. Type of inspection or test.
11. Results of test and compliance with Contract Documents.
12. Interpretation of test results, when requested by the Engineer.

E. Perform additional tests as required by the Engineer or Owner.

1.04 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

Laboratory is not authorized to:

- A. Release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Approve or accept any portion of the work.
- C. Perform any duties of the Contractor.

1.05 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to work, and to manufacturer's operations.
- B. Secure and deliver to the laboratory, when requested by the Engineer, adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete and other materials mixes which require control by the testing laboratory.
- D. Furnish copies of products test reports as required.
- E. Furnish incidental labor and facilities:
 1. To provide access to work to be tested.
 2. To obtain and handle samples at the project site or at the source of the product to be tested.
 3. To facilitate inspections and tests.
 4. For storage and curing of test samples.
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests. When tests or inspections cannot be performed after such notice, reimburse the Owner for laboratory personnel time and travel expenses incurred due to Contractor's negligence.

G. Make arrangements with the laboratory and pay for additional samples and tests required for Contractors convenience.

H. Contractor to pay for all retesting as a result of test failure.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01505

MOBILIZATION

PART 1 - GENERAL

Under this item of work, the Contractor shall set up his necessary general plant including shops, storage areas, temporary facilities, Contractor's field offices and such sanitary and other facilities as are required by local or state law or regulation; all as required for the proper performance and completion of the work. The Contractor shall provide all items of work covered in this section which shall include but not be limited to the following principal items:

- A. Moving on the site of all Contractor's plant and equipment required for first month operations.
- B. Installing temporary construction power, wiring, and lighting facilities.
- C. Developing construction water supply.
- D. Providing on-site sanitary facilities and potable water facilities as specified.
- E. Arranging for and erection of Contractor's work and storage yard.
- F. Procurement and submittal of all required subcontractor insurance certificates and bonds.
- G. Obtaining all required permits.
- H. Posting all OSHA required notices and other information as required by Federal, State and Local Agencies. Establishment of safety programs.
- I. Have the contractor's superintendent at the job site full time.
- J. Have provided a detailed construction schedule acceptable to the Owner for project use as specified.
- K. Erection of project sign(s) as specified.
- L. Excavation Plan.
- M. Provide Pre-construction videos.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01510

TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 SCOPE OF WORK

It shall be the Contractor's responsibility to provide plant and equipment that is adequate for the performance of the work under this contract within the time specified. All plant and equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required work, and shall be subject to inspection and approval by the Owner's representative at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction. In addition, all work shall conform with requirements of the National Electric Code and other requirements specified in the Electrical Specifications.

1.02 RELATED REQUIREMENTS

Section 01010: Summary of Work

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 POWER AND LIGHTING

- A. Power. The Contractor shall provide, at his own expense, all necessary power required for the operations under the Contract, and shall provide and maintain all temporary power lines required to perform the work in a safe and satisfactory manner.
- B. Construction Lighting. All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper work and to afford adequate facilities for inspection and safe working conditions.
- C. Approval of Electrical Connections. All temporary connections for electricity shall be subject to approval of St. Tammany Parish Government and the power company representative, and shall be removed in like manner at the Contractor's expense prior to final acceptance of the work.
- D. Separation of Circuits. Unless otherwise permitted by the Engineer, lighting circuits shall be separate from power circuits.

- E. Construction Wiring. All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical shall conform to the facilities requirements of Subpart K of the OSHA Safety and Health Standards for Construction and St. Tammany Parish Codes.

3.02 WATER SUPPLY

- A. General. The Contractor shall provide, at his own expense, an adequate supply of water for construction purposes. The Contractor shall pay the water utility for water used at the job site.
- B. The Contractor shall provide and operate all pumping facilities, pipelines, valves, hydrants, storage tanks, and all other equipment necessary for the adequate development and operation of the temporary water Supply system. The Contractor shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for any claims arising from the use of same, including discharge or waste of water therefrom.
- C. Potable Water. All drinking water on the site during construction shall be furnished by the Contractor.
- D. Water Connections. The contractor shall not make connection to, or draw water from, any fire hydrant or Pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each connection made, the Contractor shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency. Only approved hydrant wrenches may be used to open and close hydrants. In instances where connections are made to water pipelines for the purpose of pressure testing newly constructed force mains or sewers, a double check valve system and pressure gage shall be utilized to prevent back flow into the water main system. In addition, all such testing should be performed in the presence of Tammany Utilities personnel.
- E. Removal of Water Connections. Before final acceptance of the Work on the project, all temporary connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Engineer and to the agency owning the affected utility.
- F. Fire Protection. The construction plant and all other parts of the work shall be connected with the Contractor's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the work, and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or

minimize the hazard of fire. The Contractor's fire protection program shall conform to the requirements of Subpart F of the OSHA Standards for Construction.

3.03 SANITATION

- A. Toilet Facilities. Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Subpart D, Section 1026.51 of the OSHA Standards for Construction.
- B. Sanitary and Other Organic Wastes. The Contractor shall establish regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor or organic materials wastes from any other source related to the Contractor's operations shall be disposed of away from the site in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto. Disposal of all such wastes shall be at the Contractor's expense.

3.04 SAFETY

- A. General. Appropriate first aid facilities and supplies shall be kept and maintained by the Contractor at the site of the work. In addition, all employees of the Contractor and his subcontractors shall be provided with, and required to use, personal protective and life saving equipment as set forth in Subpart E of the OSHA Safety and Health Standards for Construction (29 CFR 1926).
- B. Public Safety. During the performance of the work the Contractor shall erect and maintain temporary fences, bridges, railings, and barriers and shall take all other necessary precautions and place proper guards for the prevention of accidents and he shall erect and maintain suitable and sufficient lights and other signals.

END OF SECTION

SECTION 01530

PROTECTION OF EXISTING FACILITIES AND PROPERTY

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall protect all existing utilities, structures, and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements specified herein, and in accordance with the requirements of the Contract Documents.

1.02 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored immediately by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Engineer.
- B. Along the location of this Work all fences, walks, brushes, trees, shrubbery, and other physical features shall be protected and restored in a thoroughly workmanlike manner. Fences and other features removed by the Contractor shall be replaced in the location indicated by the Engineer as soon as conditions permit. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and sodded.
- C. Trees close to the Work shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are liable to damage because of his operations, but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs, and roots of trees shall be repaired by dressing, cutting, and painting according to approved methods, using only approved tools and materials.
- D. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the Proposal.

1.03 OPEN EXCAVATIONS

All open excavations shall be adequately safeguarded by providing temporary barricades, cautions signs, lights, and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen.

1.04 UTILITY EXPLORATION

- A. Test pits for the purpose of locating underground pipelines or structures in advance of the construction shall be excavated and backfilled by the Contractor prior to commencement of construction. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer.
- B. The Contractor shall determine the exact locations and depths of all utilities indicated on the drawings. In addition to those indicated, the Contractor shall make exploratory excavations of all utilities. All such exploratory excavations shall be performed as soon as practicable after award of contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's work. When such exploratory excavations show the utility location as indicated on the drawings to be in error, the Contractor shall so notify the Engineer. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment of the utility.
- C. The locations of underground and other nonvisible utilities shown have been determined from data either furnished by the agencies controlling such data and/or extracted from records made available by agencies controlling such records. Where found, the surface features of locations are shown. The actual nonvisible locations may vary from those shown. Each agency should be contacted relative to the precise location of its underground installation prior to any reliance upon the accuracy of such location shown. Prior to excavating, the Contractor shall call Louisiana One Call (1-800-272-3020) to mark the construction area.

1.05 RIGHTS-OF-WAY

- A. The Contractor shall not do any work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the Contractor enter upon the rights-of-way involved until the Contractor has secured authority therefore from the proper party. After authority has been obtained, the Contractor shall give said party due notice of his intention, and shall give said party convenient access to every facility for removing, shoring, supporting, or otherwise protecting such pipeline, transmission line, ditch, fence, or structure, and for replacing same. When 2 or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the Owner shall decide which Contractor shall progress at the same time, and in what manner. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such

privilege of access or any other reasonable privilege may be granted by the Owner to the Contractor so desiring, to the extent, amount, in the manner, and at the times permitted. No such decision as to the method or time of conducting the work or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the work in Article 15, of the General Conditions of the Contract.

- B. The Contractor shall be aware that his work will be performed adjacent to private property. The Contractor shall notify all property owners adjacent to and along the route once at the award of the contract and once at least 48 hours in advance of construction by means of either a printed circular or form letter of the general details of the construction. The letter shall also include names and telephone numbers for key project personnel so that property owners can report problems. These contact telephone numbers shall be given so that appropriate personnel can be contacted 24 hours a day, seven days a week.
- C. The Contractor shall not enter or occupy private land outside of easements, except by permission of the Owner.

1.06 PROTECTION OF STREET OR ROADWAY MARKERS AND TRAFFIC SIGNS

The Contractor shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. It shall be the Contractor's responsibility to notify the proper representatives of the Owner of the time and location that work will be done. Such notification shall be sufficiently in advance of construction so that there will be no delay due to waiting for survey points to be satisfactorily referenced for restoration. All survey markers or points disturbed, without proper authorization by the Engineer, will be accurately restored at the Contractors expense. All traffic signs shall be restored to the original condition and location at the Contractors expense.

1.07 NOTIFICATION BY THE CONTRACTOR

Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipeline; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the Contractor shall notify the respective authorities representing the owners or agencies responsible for such facilities five (5) working days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire. The Contractor shall request that each utility Owner mark (or stakeout) in the field the location of existing facilities.

1.08 CONFLICTS WITH OTHER UTILITIES

- A. At various locations along the project, the proposed pipeline may closely parallel or cross existing gas lines, buried telephone cables or ducts or other utilities.

- B. It shall be the Contractors responsibility to give the appropriate utility company sufficient advance notice so that their representatives may verify the utility location on the job site when trenching operations begin. The Contractor shall coordinate and cooperate with these utilities to insure that no damages occur which would cause interruption of their services.
- C. All temporary support, or minor adjustment which does not require replacement or direct by-pass connections to these existing services (such as all direct-buried telephone cables or two-inch and smaller gas lines) will be the responsibility of the Contractor.
- D. The Owner will not be responsible for any delay or inconvenience to the Contractor resulting from the existence, removal or adjustment of any utility. Additional costs incurred as a result therefore shall be the expense of the Contractor, and considered as included in the contract bid.
- E. Maintenance of Drainage. Contractor shall be responsible for maintenance of existing drainage patterns by temporary ditches, culverts, etc. All existing drainage facilities shall be returned to original condition prior to completion of contract.

1.09 RELATED WORK

Section 02901 Tree Protection (if required)

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: The Contractor shall protect all utilities and other improvements which may be impaired during construction operations. It shall be the Contractors responsibility to ascertain the actual location of all existing utilities and other improvements indicated on the drawings that will be encountered in his construction operations and to see that such utilities or other improvements are adequately protected from damage due to such operations. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be directed by the Engineer.
- B. Owner's Right of Access: The right is reserved to the Owner and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the work of this Contract.

- C. Known Utilities: Existing utility lines that are shown on the drawings or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired by the Contractor at his expense.
- D. Unknown Utilities: The Contractor is required to use care in preparing excavations and shall conduct Utility Explorations including utility excavations and field investigations to assess the layout of subsurface facilities at each excavation site prior to the commencement of work. The Contractor shall uncover subsurface obstructions in advance of construction so that existing subsurface facilities may be identified before the work reaches the obstruction. The Contractor shall proceed at all times with caution while excavating.
- E. Should the Contractor encounter subsurface and/or latent conditions at the site substantially different from those shown on the Drawings or indicated in the Specifications, he shall immediately give notification to the Engineer of such conditions. The Engineer shall thereon promptly investigate the conditions and if he finds that they are substantially different from those shown on the Plans or Specifications, he shall make such changes in the Plans and/or Specifications as he may find necessary. Any increase or decrease in the cost resulting from these changes when appropriate shall be adjusted under the applicable provisions of the contract documents.
- F. Utilities to be Removed: When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Utility Owner and the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of the service.
- G. Approval of Repairs: All repairs to a damaged improvement shall be inspected and approved by an authorized representative of the improvement owner before being concealed by backfill or other work.
- H. Relocation of Utilities: Where the proper completion of the work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is shown on the drawings, the Contractor shall at his own expense and with prior approval from the Owner of the utility, remove and, without, unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal. In the event that the Utility Owner prefers its personnel to perform the above described work, the Contractor shall fully reimburse said utility Owner for any costs associated with such work.

- I. Maintaining in Service: All oil and gasoline pipelines, power, and telephone or other communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the work shall be maintained continuously in service during all the operations under the Contract, unless other arrangements are made satisfactory to the Owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole or wire or cable. The Contractor shall be responsible for and shall make good all damage due to its operations, and the provisions of this Section shall not be abated even in- the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

3.02 SUBSURFACE OBSTRUCTIONS

- A. The Contractor shall, field determine before pipeline trench and associated excavations are begun the depth and location of existing utilities. Utility locations indicated on the plans were obtained from the records available, but have not been field verified, nor have depths been measured or observed. The Contractor shall submit descriptions, depths and locations of subsurface obstructions to the Engineer for review at the time it is determined that obstructions exist before or after excavation.
- B. In excavation, backfilling, and in laying pipe, care shall be taken not to remove, disturb, or injure existing pipes, conduits or structures. If necessary, the Contractor at his own expense, shall sling, shore up, and maintain such structures in operation.
- C. The Contractor shall obtain the permission of and give sufficient notice to the proper authorities of their intention to remove or disturb any pipe, conduit, etc., and shall abide by their regulations governing such work.
- D. In the event that subsurface structures are broken or damaged in the prosecution of the Work, the Contractor shall immediately notify the proper authorities and the Engineer, and at the option of said authority, either repair the damage at once at his own expense, or pay the proper charges for repairing said damage. Repairs shall be made to the satisfaction of the Owner. The Contractor shall be responsible for any damage to, persons or property caused by such breaks, or due to his own neglect in reporting and/or repairing such damages.

3.03 TREES AND SHRUBS WITHIN RIGHTS-OF-WAY AND PROJECT LIMITS

- A. General: The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and within or outside the project limits, and shall not trim, remove or relocate any trees unless such trees have been approved for trimming, removal or relocation by the Engineer and the jurisdictional agency or Owner. All existing trees and shrubs which are damaged during construction shall be trimmed, replaced, or relocated by a

certified tree company under permit from the jurisdictional Agency or Owner. Tree trimming, replacement, and relocation shall be accomplished in accordance with the following paragraphs. The cost of such work shall be considered incidental to the construction of the facilities proposed and no direct payment will be made.

- B. Preserve: Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades, trimming to prevent damage from construction equipment, and installing pipe and other Work by means of hand excavation or tunneling methods. Such trees shall not be endangered by stockpiling excavated material or storing equipment against trunk.
- C. Trimming: Symmetry of the tree and shrubs shall be preserved; no stubs or splices or torn branches left; clean cuts shall be made close to trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material. See Section 02901 for tree protection if required.

END OF SECTION

SECTION 01550

SITE ACCESS

PART 1 - GENERAL

1.01 HIGHWAY LIMITATIONS

The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the Work. It shall be the Contractor's responsibility to, construct and maintain, at its own expense, any haul roads required for his construction operations.

1.02 TEMPORARY CROSSINGS

- A. General: Wherever necessary or required for the convenience of the public or individual residents at street or highway crossings, private driveways, or elsewhere, the Contractor shall provide suitable temporary bridges over unfilled excavations, except in such cases as the Contractor shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges, which written consent shall be delivered to the Engineer prior to excavation. All such bridges shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the Contractor shall adopt designs furnished by said authority for such bridges, or shall submit designs to said authority for approval, as may be required.
- B. Street Use: Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alleyway, or parking area during the performance of the Work hereunder, and he shall so conduct his operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed in the public without first obtaining permission of the Owner and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown. Toe boards shall be provided to retain excavated material if required by the Engineer or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the Work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, or other drainage facilities.
- C. Street Closure: If closure of any street is required during construction, a formal application for a street closure shall be made to the authority having jurisdiction at least 30 days prior to the required street closure in order to review necessary signing and detour requirements.

END OF SECTION

SECTION 01560

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 EXPLOSIVES AND BLASTING

The use of explosives on the work will not be permitted.

1.02 DUST ABATEMENT

The Contractor shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The Contractor shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Engineer.

1.03 RUBBISH CONTROL

During the progress of the work, the Contractor shall keep the site of the work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. The Contractor shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Equipment and material storage shall be confined to areas approved by the Engineer. Disposal of all rubbish and surplus materials shall be off the site of construction, at the Contractor's expense, all in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Subpart H, Section 1926.252 of the OSHA Safety and Health Standards for Construction.

1.04 CHEMICALS

All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

1.05 TEMPORARY DRAINAGE PROVISIONS

- A. Contractor shall provide for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property.
- B. Existing drainage channels and conduits shall be cleaned, enlarged or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect owner's facilities and the work, and to direct water to prevent downstream flooding. The Contractor must obtain permission from the Owner before beginning any of the above mentioned work.

1.06 EROSION CONTROL

- A. Contractor shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection.
- B. Work shall be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation preserved to the greatest extent practicable. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion. Temporary fast growing vegetation or other suitable ground cover shall be provided as necessary to control runoff.

1.07 POLLUTION CONTROL

Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.

1.08 NOISE ABATEMENT

It shall be the responsibility of the Contractor to be in compliance with St. Tammany Parish Municipal Code for noise. Contractor shall provide for noise abatement for all equipment and procedures that might be required for execution of the project. Noise levels are not to exceed 75 (dB(A)).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01570

TRAFFIC REGULATION

PART 1 – GENERAL

1.01 DESCRIPTION

The CONTRACTOR shall be responsible for the development and implementation of a traffic control device plan (TCDP) which will provide for the safe and expeditious movement of traffic through construction zones and provide access to all residences and businesses at times in particular for mail deliveries, garbage pick-up, emergency vehicles and all other required services. A construction zone is defined as the immediate area of actual construction, which interferes with the driving or walking public. The TCDP shall comply with the requirements set forth in the Manual on Uniform Traffic Control Devices (MUTCD), as revised, and with the general requirements stipulated below.

1.02 CERTIFICATION

The TCDP shall be designed and stamped by a Professional Engineer registered in the State of Louisiana that is qualified by education and experience to perform this type of work.

1.03 SUBMITTALS

- A. The TCDP for the site shall address the conditions for providing traffic flow within the zone during the influence of construction. The TCDP shall be schematically drawn on 8 ½" x 11" sheet(s) with adequate details and be easily readable and reproducible.
- B. Where the TCDP involves a state highway, the CONTRACTOR shall submit seven (7) copies of the TCDP to the Louisiana Department of Transportation's Engineering Division's. Such approval is required prior to start of any work.
- C. The TCDP shall be submitted to the Project Engineer for review and approval at least 30 days before the commencement of any work. The Contractor shall anticipate a minimum two (2) week review and approval period for a TCDP by the Engineer and all applicable St. Tammany Parish Government departments.
- D. All road closure and detour requests must be submitted for approval by Tammany Utilities, Department of Engineering, and the Department of Public Information no less than three (3) weeks before the closure is required. The Road Closure request shall be accompanied by a copy of the previously approved Traffic Control Device Plan (TCDP) with the area requested for closure highlighted as well as a "Major Street Closure Check List" and a "Road Closure Notice". This request, upon approval of the Engineer, shall be routed through Tammany Utilities. The Contractor shall

anticipate a three (3) week Road Closure Request review, approval and dissemination period. St. Tammany Parish Government nor the Engineer shall not be held responsible for any delays or damages resulting from a deviation of the Traffic Control and Road Closure policy herein.

PART 2 – PRODUCTS

2.01 TRAFFIC CONTROL DEVICES

Warning signs, signals, lighting devices, markings, barricades and hand signaling devices used in the TCDP shall comply with the standard sizes and dimensions specified in the Manual of Uniform Traffic Control Devices.

PART 3 – EXECUTION

3.01 TRAFFIC CONTROL

- A. The necessary precautions shall include, but not be limited to, such items as proper construction warning signs, signals, lighting devices, markings, barricades, channelization, and hand signaling devices (flagging operations) as prescribed and set forth in the Manual of Uniform Traffic Control Devices. The CONTRACTOR shall be responsible for installation and maintenance of all devices for the duration of the construction period.
- B. All work shall be performed in accordance with LADOTD standard specifications, latest edition, except as noted. In addition to items shown on the plans, traffic control devices shall be in accordance with MUTCD.
- C. The CONTRACTOR shall be responsible for removal, relocation, or replacement of any traffic control devices in the construction area, which exist as part of the normal pre-construction traffic control scheme of the OWNER. Any such actions shall be performed by the CONTRACTOR under the supervision of the OWNER.
- D. The CONTRACTOR shall consult with the ENGINEER and OWNER immediately on any vehicular or pedestrian safety or efficiency problem incurred as a result of construction of the project. If warranted, the CONTRACTOR'S engineer shall make adjustments to the TCDP and the CONTRACTOR shall immediately implement the revised TCDP.
- E. The CONTRACTOR is responsible for daily monitoring of traffic control devices and must make appropriate changes to correspond to actual conditions.
- F. The CONTRACTOR is responsible for daily monitoring of traffic control devices and must make appropriate changes to correspond to actual conditions.

- G. The CONTRACTOR shall make a daily inspection of all MUTC devices for adherence to the submitted plan. The CONTRACTOR shall have a local representative on call in order to remediate or correct any MUTC device deficiencies during non-work hours. The CONTRACTOR shall employ the best available industry practices to eliminate the movement or property damage resulting from the movement of MUTC devices during weather events.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Material and equipment incorporated into the work:

1. Conform to applicable specifications and standards.
2. Comply with size, make, type and quality specified, or as specifically approved, in writing, by the Engineer.
3. Manufactured and Fabricated Products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract
- B. Section 01010: Summary of Work
- C. Section 01340: Shop Drawings, Product Data and Samples
- D. Section 01710: Cleaning
- E. Section 01730: Operating and Maintenance Data

1.03 REUSE OF EXISTING MATERIAL

Except as specifically indicated or specified, materials and equipment removed from the existing structure shall not be used in the completed work.

1.04 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to the Engineer.
 - 1. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accord with construction schedules; coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately upon delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.06 STORAGE AND PROTECTION

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather tight enclosure.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior Storage
 - 1. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.

2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter and entrance to drainage systems.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- D. Protection after Installation

Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.07 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Products List

Within 30 days after contract date, submit to the Engineer a complete list of major products proposed to be used, with the name of the manufacturer, supplier, and the installing subcontractor.

B. Contractor's Options

1. For products specified only by reference standard, select any product meeting that standard.
2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.
3. For products specified by naming one or more products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any product or manufacturer not specifically named.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01620

STORAGE AND PROTECTION

PART 1 – GENERAL

1.01 SCOPE OF WORK

Provide secure storage and protection for products to be incorporated before and after installation and until completion of the Work.

1.02 STORAGE

- A. Store products immediately on delivery, and protect until installed in the Work.
 - 1. Store in accordance with manufacturer's instruction, with seals and labels intact and legible.
- B. Store Products subject to damage by elements in substantial weather tight enclosures.
 - 1. Maintain temperatures within ranges required by manufacturer's instructions.
 - 2. Provide humidity control for sensitive products, as required by manufacturer's instruction.
 - 3. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.
- C. Exterior Storage
 - 1. Provide substantial platforms, blocking or skids to support fabricated products above ground, prevent soiling or staining.
 - a. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
 - 2. Store loose granular materials on solid surfaces such as paved areas, or provide plywood or sheet materials to prevent mixing with foreign matter.
 - a. Provide surface drainage to prevent flow or ponding of rainwater.
 - b. Prevent mixing of refuse or chemically injurious materials or liquids.
- D. Arrange storage in a manner to provide easy access for inspection.

END SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Comply with requirements stated in Conditions of the Contract and in specifications for administrative procedures in closing out the work.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Conditions of the Contract. Fiscal provisions, legal submittals and additional administrative requirements.
- B. Section 01710: Cleaning.
- C. Section 01720: Project Record Documents.
- D. Section 01730: Operating and Maintenance Data.
- E. Section 01740: Warranties and Bonds.

1.03 SUBSTANTIAL COMPLETION

- A. When the Contractor considers the work is substantially complete, he shall submit to the Engineer:
 - 1. A written notice that the work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.
- C. Should the Engineer determine that the work is not substantially complete:
 - 1. The Engineer will promptly notify the Contractor, in writing, giving the reasons therefore.
 - 2. The Contractor shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the Engineer.
 - 3. The Engineer will re-inspect the work.
- D. When the Engineer finds that the work is substantially complete, he will:

1. Prepare and deliver to the Owner a tentative Certificate of Substantial Completion on the appropriate parish form with - a tentative list of items to be completed or corrected before final payment.
2. After consideration of any objections made by the Owner as provided in Conditions of the Contract, and when the Engineer considers the work substantially complete, he will execute and deliver to the Owner and the contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected.

1.04 FINAL INSPECTION

- A. When Contractor considers the work is complete, he shall submit written certification that:
 1. Contract Documents have been reviewed.
 2. Work has been inspected for compliance with Contract Documents.
 3. Work has been completed in accordance with Contract Documents.
 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 5. Work is completed and ready for final inspection.
- B. Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Engineer consider that the work is incomplete or defective:
 1. Engineer will promptly notify the contractor, in writing, listing the incomplete or defective work.
 2. Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to Engineer that the work is complete.
 3. Engineer will re-inspect the work.
- D. When the Engineer finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.05 REINSPECTION FEES

- A. Should the Engineer perform re-inspections due to failure of the work to comply with the claims of status of completion made by the Contractor:
 1. Owner will compensate Engineer for such additional services.
 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.06 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - (a) Previous Change Orders
 - (b) Unit Prices
 - (c) Penalties and Bonuses
 - (d) Deductions for liquidated damages
 - (e) Deductions for re-inspection payments
 - (f) Other adjustments
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. Engineer will prepare a final Change order, reflecting approved adjustments to the contract sum which are not previously made by change orders.

1.07 FINAL APPLICATION FOR PAYMENT

Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the Conditions of the Contract.

1.08 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Project Record Documents.
- B. Warranties and Bonds.
- C. Evidence of Payment and Release of Liens: To requirements of General and Supplementary conditions.
- D. Certificates of Insurance for Products and Completed operations.
- E. As-Built Drawings.
- F. Maintenance Manuals.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Execute cleaning, during progress of the work, and at completion of the work, as required by General conditions.

1.02 RELATED REQUIREMENTS

A. Conditions of the Contract.

B. Each Specification Section: Cleaning for specific products or work.

1.03 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.

B. Provide on-site containers for the collection of waste materials, debris and rubbish.

- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled, workmen for final cleaning.
- B. Rake the surfaces of the grounds clean.
- C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed exterior surfaces, and all work areas, to verify that the entire work is clean.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall maintain at the site for the Owner's permanent records one copy of:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other Modifications to the Contract.
5. Engineer Field Orders or Written Instructions.
6. Approved Shop Drawings, Product Data.
7. Field Test Records.
8. Construction Photographs.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01340: Shop Drawings, Product Data and Samples.
- B. Section 01700: Contract Closeout.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. The Contractor shall store documents and samples in his office apart from documents used for construction.
- B. The Contractor shall maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- C. The Contractor shall make documents and samples available at all times for inspection by the Engineer and Owner.

3.02 MARKING-UP RECORD DRAWINGS

The Contractor shall mark with red erasable pencil and, where necessary, use other pencil colors, as required.

3.03 RECORDING

- A. Label each document (including record prints and shop drawings) "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- C. Drawings. Legibly mark field drawings to record actual construction:
 - 1. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 2. Field changes of dimensions and details.
 - 3. Changes made by change order.
 - 4. Details not on original Contract Drawings.
- D. Specifications and Addenda. The Contractor shall legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.

3.04 SUBMITTALS

- A. At Contract close-out deliver record documents to the Engineer including marked-up drawings, as-built survey, specifications, addenda, change orders and other modifications to contract; Engineers field orders and written instructions, approved shop drawings, product data, field test records and any other documents which serve as a record of actual field installation and construction different from the original contract documents. Engineer will submit them to Owner.
- B. Accompany submittals with transmittal letters in duplicates containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. Title and number of each Record Document
 - 5. Signature of Contractor or his authorized representative

END OF SECTION

SECTION 01730

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under contract. Prepare operating and maintenance data as specified in this section and as referenced in other pertinent sections of the specifications.
- B. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

1.02 RELATED REQUIREMENTS

- A. Section 01340: Shop Drawings, Product Data and Samples.
- B. Section 01700: Contract Closeout.
- C. Section 01740: Warranties and Bonds.

1.03 FORM OF SUBMITTALS

- A. Prepare data in form of an instructional manual for use by Owner's personnel.
- B. Format:
 - 1. Size: 8 1/2" X 11".
 - 2. Paper: 20 pound minimum, white, for typed pages.
 - 3. Text: Manufacturer's printed data, or neatly typewritten.
 - 4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to size of text pages.
 - 5. Provide fly-leaf for each separate product or each piece of operating equipment.
 - a. Provide typed description of product and major component parts of equipment.
 - b. Provide indexed tabs
 - 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS".

7. List:

- a. Title of project.
- b. Identity of separate structure as applicable.
- c. Identity of general subject matter covered in the manual.

C. Binders:

1. Commercial quality 3-ring binders with durable and cleanable plastic covers.
2. Maximum ring size: 1”
3. When multiple binders are used, correlate the data into related consistent groupings.

1.04 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit five (5) copies of complete manual in final form.

B. Content, for each unit of equipment and system, as appropriate:

1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts, which are cross-referenced with manufacturer's parts list.
2. Operating procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shutdown and emergency instructions.
 - c. Summer and winter operating instructions (if applicable).
 - d. Special operating instructions.
3. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassemble, repair and reassemble.
 - d. Alignment, adjusting and checking.
4. Servicing and lubrication schedule.
 - a. List of lubricants required.
5. Manufacturer's printed operating and maintenance instructions.
6. Description of sequence of operation by control manufacturer.

7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 - a. Predicted life of parts subject to wear.
 - b. Items recommended to be stocked as spare parts.
 8. As-installed control diagrams by controls manufacturer.
 9. Each contractor's coordination drawings.
 - a. As-installed color coded piping diagrams.
 10. Charts of valve tag numbers, with location and function of each valve.
 11. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 12. Other data as required under pertinent sections of specifications.
- C. Content, for each electric and electronic system, as appropriate:
1. Description of system and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Circuit directories of panel boards.
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed color coded wiring diagrams.
 4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
 5. Maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and reassembly.
 - d. Adjustment and checking.
 6. Manufacturer's printed operating and maintenance instructions.

7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Other data as required under pertinent sections of specifications.
- D. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
 - E. Additional requirements for operating and maintenance data: Respective sections of specifications.

1.05 SUBMITTAL SCHEDULE

- A. Submit two (2) copies of preliminary draft of proposed formats and outlines of contents. Engineer will review draft and return one copy with comments.
- B. Submit one (1) copy of completed data in final form fifteen days prior to final inspection. Copy will be returned after final inspection with comments.
- C. Submit specified number of copies of approved data in final form ten (10) days after final inspection.

1.06 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems.
- B. Operating and maintenance manual shall constitute the basis of instruction. Review contents of manual with personnel, in full detail, to explain all aspects of operations and maintenance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to Engineer for review and transmittal to owner.

1.02 RELATED REQUIREMENTS

- A. Instructions to Bidders: Bid or Proposal Bonds.
- B. Conditions of the Contract: Performance Bond and Labor and Material Payment Bond.
- C. Conditions of the Contract: General Warranty of Construction.
- D. Section 01700: Contract Closeout.
- E. Section 01730: Operating and Maintenance Data.

1.03 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: Two (2) each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning of warranty, bond or service and maintenance contract.
 - 5. Duration of warranty, bond, or service maintenance contract.

6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
7. Contractor, name of responsible principal, address and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 1. Size 8 1/2" x 11", punch sheets for standard 3-ring binder. Fold larger sheets to fit into binders.
 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
 - a. Title of project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.

1.05 TIME OF SUBMITTALS

- A. Make submittals within ten days after Date of Substantial Completion, prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.06 SUBMITTALS REQUIRED

Submit warranties, bonds, service and maintenance contracts as specified in respective sections of specifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02100

SITE PREPARATION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This section covers clearing, grubbing, and stripping along the construction sites.
- B. The Contractor shall clear and grub all of the area within the limits of construction or as required, which includes, but is not limited to, utility easements (servitudes) The width of the area to be cleared shall be reviewed by the Engineer prior to the beginning of any clearing.
- C. The Contractor's attention is directed to any Soil Erosion and Sediment Control Ordinances in force in the Parish. The contractor shall comply with all applicable sections of these ordinances.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02220: Excavation, Backfill, Fill and Grading for Structures
- B. Section 02221: Earth Excavation and Backfill in Trenches

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 CLEARING

The surface of the ground, for the area to be cleared and grubbed, shall be completely cleared of all timber, brush, stumps, roots, grass, weeds, rubbish, and all other objectionable obstructions resting on or protruding through the surface of the ground. However, those trees which are designated by the Engineer shall be preserved as hereinafter specified. Clearing operations shall be conducted so as to prevent damage to existing structures and installations, and to those under construction, so as to provide for the safety of employees and others.

3.02 GRUBBING

Grubbing shall consist of the complete removal of all stumps, roots larger than 1-1/2 inches in diameter, matted roots, brush, timber, logs, and any other organic or metallic debris not suitable for foundation purposes, resting on, under or protruding through the

surface of the ground to a depth of 18 inches below the subgrade. All depressions excavated below the original ground surface for or by the removal of such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

3.03 STRIPPING

In areas so designated, topsoil shall be stockpiled. Topsoil so stockpiled shall be protected until it is placed as specified. Any topsoil remaining after all work is in place shall be disposed of by the Contractor.

3.04 DISPOSAL OF CLEARED AND GRUBBED MATERIAL

The Contractor shall dispose of all material and debris from the clearing and grubbing operation by hauling such material and debris off site. The cost of disposal (including hauling) of cleared and grubbed material and debris shall be considered a subsidiary obligation of the Contractor; the cost of which shall be included in the contract prices for the various classes of work.

3.05 PRESERVATION OF TREES

Those trees which are designated for preservation by the Engineer shall be carefully protected from damage. The Contractor shall erect such barricades, guards, and enclosures as may be considered necessary for the protection of the trees during all construction operations.

3.06 PRESERVATION OF DEVELOPED PRIVATE PROPERTY

- A. The Contractor shall exercise extreme care to avoid unnecessary disturbance of developed private property along the route of the construction. Trees, shrubbery, gardens, lawns, and other landscaping, which in the opinion of the Engineer must be removed, shall be replaced and replanted to restore the construction easement to the condition existing prior to construction.
- B. Improvements to the land, such as fences, walls, outbuildings, and other structures which of necessity must be removed, shall be replaced with equal quality materials and workmanship.
- C. The Contractor shall clean up the construction site across developed private property directly after construction is completed, upon approval of the Engineer.

3.07 PRESERVATION OF PUBLIC PROPERTY

The appropriate paragraphs of Articles 17.01, 17.02 and 17.03 of these specifications shall apply to the preservation and restoration of public lands, parks, rights-of-way, easements, servitudes, and all other damaged areas.

END OF SECTION

SECTION 02140

DEWATERING

PART 1 - GENERAL

1.01 SCOPE

This section shall include supplying materials, equipment, services, and labor necessary to prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area. The Contractor shall dewater and dispose of the water so as not to cause injury to public or private property, or to cause a nuisance or a menace to the public. It shall be the sole responsibility of the Contractor to have adequate equipment and personnel at the site at all times to comply with these requirements.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01390: Excavation Plan.
- B. Section 02220: Excavation, Backfill, Fill and Grading
- C. Section 02221: Earth Excavation and Backfill in Trenches

1.03 SUBMITTALS

Prior to beginning dewatering operations, and as a part of the excavation plan, the Contractor shall submit, in writing to the Engineer, his proposed plan to comply with the requirements of this section. Submittal shall contain proposed equipment, methods of conveyance, and discharge point for water removed from excavations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 INSTALLATION

The Contractor shall install all equipment necessary for dewatering. He shall have on hand, at all times, sufficient pumping equipment and machinery in good working condition and shall have available, at all times, competent workmen for the operation of the pumping equipment. Adequate standby equipment shall be kept available at all times to insure efficient dewatering and maintenance of dewatering operation during power failures.

3.02 PERFORMANCE

The control of groundwater shall be such that softening of the bottom of excavations or formation of unstable conditions during excavation shall be prevented. Dewatering systems shall be designed and operated to prevent erosion of the natural soils. Care shall be taken to prevent disturbance, due to the method of dewatering, of pipe bedding already in place in the trench. The Contractor is fully responsible for maintaining the integrity of previously placed pipe and bedding during dewatering and the release of groundwater.

During excavation, construction of structures, installation of pipelines, placement of the structure and trench backfill, and the placing and setting of concrete, excavations shall be kept free of water. The Contractor shall control surface runoff to prevent entry or collection of water in excavations. The static water level shall be controlled in the vicinity of the excavation to maintain the undisturbed state of the foundation soils and allow the placement of any fill or backfill to the required density. The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not altered to an extent that would damage or endanger adjacent structures or property.

3.03 RELEASE OF GROUNDWATER

The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines, and sewers.

3.04 PAYMENT

All work in this section shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the price for the associated items bid.

END OF SECTION

SECTION 02160

SHEETING, SHORING, AND BRACING

PART 1 - GENERAL

1.01 SCOPE

This section shall include supplying materials, services, and labor necessary to provide sheeting, shoring, and bracing or supports as required to provide a safe working condition for Contractor's personnel and to provide for protection of utilities, buildings, and structures. It shall be the sole responsibility of the Contractor to comply with these requirements.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01390: Excavation Plan
- B. Section 02140: Dewatering
- C. Section 02220: Excavation, Backfill, Fill and Grading for Structures
- D. Section 02221: Earth Excavation and Backfill in Trenches

1.03 SUBMITTALS

Prior to beginning sheeting and shoring operations, and as a part of the excavation plan, the Contractor shall submit, in writing to the Engineer, his proposed plan to comply with the requirements of this Section. The Contractor is solely responsible to design, provide, install and maintain support systems required to complete the work in a continuous safe manner. The submitted plan shall be designed and stamped by a Louisiana Registered Civil or Structural Engineer. The submittal shall also include but is not limited to information on driving method, driving equipment, leads and other equipment utilized directly during the sheeting, shoring and bracing operations. No excavation work shall be allowed to commence until the Contractor has fulfilled this requirement and received written approval to proceed from the Engineer. Refer to Section 01390 for terms of any soil or pre-bid data supplied by the owner or Engineer.

1.04 SAFETY REQUIREMENTS

All sheeting, shoring, and bracing of excavations shall conform to requirements necessary to comply with local codes and authorities having jurisdiction.

Sheet pile installations will cause vibrations that may affect existing residences or underground utilities in the vicinity of the proposed excavation. Peak particle velocities due to sheet pile installation shall be monitored at critical locations with a seismograph

during the installation of sheet piles. The record of peak particle velocities will provide information in assessing the need for changes in driving operations and the types of changes best suited for the project requirements. Monitoring will be performed by an independent testing lab retained by the Owner. No driving operations shall take place without vibration monitoring on site and in place.

PART 2 - PRODUCTS

2.01 WOOD SHEETING

Wood for shoring and sheeting shall be green, rough cut hardwood (i.e. oak or hickory) Planking for sheeting and foundation lumber shall have a minimum thickness of 2 inches.

2.02 STEEL SHEETING

Steel sheet piling shall be a continuous interlock design. The sheet piling must, be in good condition and shall provide a tight interlocking connection which will retard the infiltration of ground water. Steel sheeting is recommended at all deep lift station and force main installations.

PART 3 - EXECUTION

3.01 PERFORMANCE

The planning, installation and removal of all sheeting, shoring, bracing, and sheet piling shall be accomplished in such a manner as to maintain the required trench or excavated cross section and to maintain the undisturbed state of the soils adjacent to the trench and below the excavated bottom. All trenches and structural excavations shall be properly sheeted, shored and braced.

The use of horizontal strutting below the barrel of a pipe or structure or the use of a pipe as support for trench bracing will not be permitted.

Wood sheeting shall be left in place and the upper part of the sheeting shall be cut off 3 feet below the finished ground surface after backfilling. All bracing above this level shall also be removed. Lower bracing shall be left in place.

Steel Sheeting shall be driven and extracted by either the vibratory or push/pull methods only. Impact driving or jetting shall not be allowed unless approved by the Engineer.

Steel sheeting, when determined necessary by the Contractor or when directed by the Engineer, shall be left in place and the upper part of sheeting shall be cut off 3 feet below the finished ground surface after backfilling. All bracing above this level shall be removed. The right of the Engineer to order sheeting and bracing left in place shall not be

construed as creating any obligation on his part to issue such orders, and his failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or upon the work occasioned by negligence or otherwise, growing out of a failure on the part of the contractor to leave in place in the trench sufficient sheeting and bracing to prevent any caving or moving of the ground adjacent to the sides of the trench.

Steel sheeting or piling which are withdrawn shall be extracted in a manner so as to prevent subsequent settlement of the pipe or produce additional loadings to the structure and to maintain the undisturbed state of the soil adjacent to the trench or in the immediate area.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 STATUTORY REQUIREMENTS

All excavation, trenching, sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926.650 Subpart P).

1.02 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and perform all excavation work and grading; place and compact backfill and fill; and dispose of unsuitable waste and surplus materials as shown on the Drawings and as specified herein.
- B. Provide the services of a licensed professional engineer, registered in the State in which the work is located, to prepare temporary excavation support system designs and submittals.
- C. Furnish and install temporary excavation support systems, including sheeting, shoring and bracing, to insure the safety of personnel and protect adjacent structures, piping, etc, in accordance with Federal, State and local laws, regulations and requirements.

1.03 RELATED WORK

- A. Dewatering and Drainage is included in Section 02140.
- B. Sheeting, Shoring and Bracing Section 02160.
- C. Roadway and Street Restoration is included in Section 02500.

1.04 SUBMITTALS

Excavation support system designs shall be prepared by a licensed professional engineer registered in the State in which the work is located, having a minimum of 5 years of professional experience in the design and construction of excavation support systems. Submit an original and three copies of the licensed professional engineer's certification, stating that the excavation support systems designs have been prepared by the professional engineer and that the professional engineer will be responsible for their execution. Do not submit excavation support system designs unless requested in writing.

1.05 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

1. ASTM D698 - Test Method for Laboratory Compaction Characteristics of Soils Using Standard Efforts.
2. ASTM D1557 - Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.

B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.06 QUALITY ASSURANCE

A. At all structures, prior to the placement of bedding material, concrete work mats, structural fill or structural concrete, coordinate with the soils testing laboratory to verify the suitability of the existing subgrade soil and to perform in-place soil density tests as required to verify that the bearing capacity of the subgrade is sufficient.

B. Prior to and during the placement of backfill and fill coordinate with the soils testing laboratory to perform in-place soil density tests to verify that the backfill/fill material has been compacted in accordance with the compaction requirements specified elsewhere. The Engineer may designate areas to be tested.

1.07 DEFINITIONS

A. Where the phrase "in-the-dry" is used in this Section, it shall be defined to mean a soil condition such that the in-place moisture content of the soil at that time is no more than two percentage points above the optimum moisture content of that soil as determined by the laboratory test of the moisture-density relation appropriate to the specified level of compaction.

B. Where used in this Section "structures" refers to all buildings, wet wells, manholes and below grade vaults. Storm water structures and duct banks are not considered structures in this context.

PART 2 - PRODUCTS

2.01 GENERAL

Timber used for excavation support systems shall comply with the requirements of Section 02160.

PART 3 – EXECUTION

3.01 PREPARATION

A. Test Pits

1. Perform exploratory excavation work (test pits) for the purpose of verifying the location of underground utilities and structures and to check for unknown utilities and structures, prior to commencing excavation work.
2. Test pits shall be backfilled as soon as the desired information has been obtained. Backfilled surfaces shall be stabilized in accordance with approved erosion and sedimentation control plans.

B. Dewatering and Drainage Systems

Temporary dewatering and drainage systems shall be in place and operational prior to beginning excavation work.

3.02 EXCAVATION SUPPORT

- A. Furnish, install, monitor and maintain excavation support (e.g., shoring, sheeting, bracing, trench boxes, etc) as required by Federal, State or local laws, ordinances, regulations and safety requirements. Support the sides of excavation, to prevent any movement which could in any way reduce the width of the excavation below that necessary for proper construction and protect adjacent structures from undermining, settlement or other damage. Take care to prevent the formation of voids outside of sheeting. If voids occur behind sheeting, immediately backfill and compact the voids with common fill material. Voids in locations that cannot be properly compacted upon backfilling shall be filled with lean concrete.
- B. Install excavation supports outside the neat lines of foundations. Supports shall be plumb and securely braced and tied in position. Excavation support shall be adequate to withstand all pressures to which the supports will be subjected. Any movement or bulging of supports shall be corrected to provide the necessary clearances, dimensions and structural integrity.
- C. Excavation supports shall be carefully removed in such manner so as not to endanger the Work or other adjacent structures, utilities, or property. All voids left or caused by withdrawal of supports shall be immediately filled with sand and compacted.

3.03 STRUCTURAL EXCAVATION PROCEDURES

- A. Excavations for structures shall be suitably wide for construction of the structures, including excavation supports, dewatering and drainage systems and working clearances.
- B. Excavation shall be performed in-the-dry and shall be accomplished by methods which preserve the undisturbed state of subgrade soils. Drainage and dewatering systems shall be in place and operational prior to beginning excavation work. In no

case shall the earth be plowed, scraped or excavated by any means so near to the finished subgrade that would disturb the finished subgrade. Hand excavation of the final 3 to 6-in may be required to obtain a satisfactory, undisturbed subgrade. Subgrade soils which become soft, loose, "quick", or otherwise unsatisfactory for support of structures as a result of inadequate excavation, dewatering, or other construction methods shall be removed and replaced with lean concrete, compacted structural fill or suitable crushed rock, subject to prior approval by the Engineer, at no additional cost to the Owner.

C. Subgrade Preparation

1. All structures unless otherwise shown on the Drawings or otherwise specified herein: Compact the top 12-in of subgrade to a minimum of 95 percent modified proctor (ASTM D1557).
 2. Where existing subgrade contains a significant amount of clay or cohesive soils, over-excavate sufficiently below the bottom of structure for placement of a lean concrete working mat. Prior to placing the lean concrete working mat, compact the top 12-in of existing subgrade to a minimum of 95 percent modified proctor (ASTM D1557).
- D. When excavations have reached the required subgrade, including any allowances for working mats or base materials, prior to the placement of working mats or base materials, notify the soils testing laboratory to verify the suitability of the existing subgrade soils for the anticipated foundation and structural loadings. If the existing subgrade soils are determined to be unsuitable, direction will be provided by the Engineer regarding removal and replacement with suitable materials. If Contractor believes that such direction would increase Contractor's cost and would thereby entitle Contractor to a change in Contract cost. Contractor shall notify the Engineer in accordance with the applicable article(s) in the General Conditions pertaining to changes in the work.
- E. Over-excavation beyond the limits and depths required by the Contract Documents shall be replaced at no additional cost to the Owner by lean concrete or structural fill or other approved material subject to the prior approval of the Engineer.

3.04 GENERAL FILLING AND BACKFILLING PROCEDURES

- A. Fill and backfill materials shall be placed in lifts to suit the specified compaction requirements to the lines and grades required, making allowances for settlement and placement of cover materials (i.e. topsoil, sod, etc). Soft spots or uncompacted areas shall be corrected.
- B. Compaction in open areas may be accomplished by any of the following methods: compaction equipment, fully loaded ten-wheel trucks, tractor dozers weighing at least 30,000 lbs and operated at full speed, or heavy vibratory rollers. Compaction in confined areas (including areas within a 45 degree angle extending upward and outward from the base of a wall) and in areas where the use of large equipment is

impractical, shall be accomplished by hand operated vibratory equipment or mechanical tampers. Lift thickness shall not exceed 6-in (measured before compaction) when hand operated equipment is used.

- C. Fill and backfill shall not be placed and compacted when the materials are too wet to properly compact (i.e. the in-place moisture content of the soil at that time is no more than three percentage points above the optimum moisture content of that soil as determined by the laboratory test of the moisture-density relation appropriate to the specified level of compaction).

3.05 FILL AND BACKFILL PROCEDURES

- A. Fill and backfill material placed immediately adjacent to and within 10-ft of all structures shall be select fill. All structure water-tightness tests and damp proofing /waterproofing shall be completed prior to placing fill or backfill around structures. Place and compact select fill in even lifts of 6-in (compacted thickness) uniformly around the structure.
- B. Common fill maybe used in areas beyond those designated for select fill unless, shown or specified otherwise. Common fill shall be placed in even lifts having a maximum thickness (measured before compaction) of 12-in.
- C. Fill required beneath building slabs or slabs on grade (except sidewalks) shall be structural fill. Place and compact structural fill in even lifts of 6-in (compacted thickness).

3.06 COMPACTION REQUIREMENTS

- A. 10-ft around structures: Compact the top 12-in of existing subgrade and each layer of fill or backfill to a minimum of 92 percent modified proctor (ASTM D1557) at or near its optimum moisture content (minus 2 to plus 3 percent).
- B. Embankments (except under roadways), lawn or unimproved areas: Compact the top 6-in of existing subgrade and each layer of fill or backfill to a minimum of 92 percent standard proctor (ASTM D698) at or near its optimum moisture content (minus 1 to plus 4 percent).
- C. Beneath building slabs and slabs on grade (except sidewalks): Compact the top 12-in of existing subgrade (and each layer of fill if applicable) to a minimum of 95 percent modified proctor (ASTM D1557) at or near its optimum moisture content (minus 2 to plus 3 percent).
- D. Sidewalks: Compact the top 6-in of existing subgrade (and each 6-in layer of fill if applicable) to a minimum of 95 percent modified proctor (ASTM D1557) at or near its optimum moisture content (minus 2 to plus 3 percent).

E. Roads, paved areas and roadway embankments: Compact the top 12-in of existing subgrade and each layer of fill or backfill to a minimum of 95 percent modified proctor (ASTM D1557) at or near its optimum moisture content (minus 2 to plus 3 percent).

3.07 DISPOSAL OF UNSUITABLE, WASTE AND/OR SURPLUS EXCAVATED MATERIAL.

Unsuitable, waste and surplus excavated material shall be removed and disposed of off-site. Materials may be temporarily stockpiled in an area within the limits of construction that does not disrupt construction activities, create any nuisances or safety hazards, or otherwise restrict access to the work site.

END OF SECTION

SECTION 02220

EXCAVATION, BACKFILL, FILL AND GRADING FOR STRUCTURES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Structural excavation shall consist of the removal of material for the construction of foundations for launching and receiving pits for horizontal directional drilling, and other excavation designated on the plans or in these specifications.
- B. Structural excavation and backfill shall consist of furnishing material, if necessary, and placing and compacting backfill material around structures to the lines and elevations designated on the plans or specified or directed by the Engineer.
- C. Structural excavation and backfill shall include the furnishing of all materials, equipment and incidentals which may be necessary to perform the excavations, place and compact the backfill, sheeting, bracing, and dewatering necessary. It shall also include the wasting or disposal of surplus excavated material in a manner and in locations approved by the Engineer.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01390: Excavation Plan
- B. Section 01410: Testing Laboratory Services
- C. Section 02221: Earth Excavation and Backfill in Trenches
- D. Section 03100: Concrete Formwork

1.03 QUALITY

A. Testing Agency:

In-place soil compaction tests to be performed by testing laboratory employed by Owner.

B. Reference Standards:

1. American Society for Testing and Materials (ASTM):

- a. ASTM C 127, Density, Relative Density, and Absorbtion of Coarse Aggregate.

- b. ASTM D 1557, Moisture-Density Relations of Soils Using 10-lb (4.5-kg) Hammer and 18-in (457-mm) Drop.
- c. ASTM D 2487, Classification of Soils for Engineering Purpose.
- d. ASTM D 4253, Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
- e. ASTM D 4254, Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

1.04 JOB CONDITIONS

- A. Time of construction should be kept to a minimum.
- B. Sheet piling, shoring and dewatering during construction should be properly designed to keep a stable excavation at all times to prevent disturbance of the in-place soils.
- C. As specified in Section 02221, the Contractor shall provide, operate and maintain all necessary pumps, discharge lines, well points, etc., in sufficient number and capacity to keep all excavation, bases, pits, etc., in conformance with the indicated foundation construction condition at each structure at all times throughout the period of construction.
- D. As specified in Section 02221, the Contractor shall assume all responsibility for security of the excavation required, employing bracing, lining or other accepted means necessary to accomplish same.
- E. Excavated areas shall be cleared of all debris, water, slush, muck, and soft or loose earth and shall be conditioned to the entire satisfaction of the Engineer.
- F. All excavated material unsuitable for use or which will not be used shall be removed from the site of the work by the Contractor. The Contractor shall remove and dispose of excess backfill material, at his expense.
- G. All excavations encountering stumps, roots, logs, etc., at the grade of the pit shall be removed of such designated bottom items by the Contractor and refilled with proper material.

PART 2 - PRODUCTS

2.01 SELECT FILL

Select fill shall be used as backfill material for trenches in unpaved areas. When a water or sewer structure will be or is located in a non-paved area, select fill placed around the top of a water or sewer structure shall have a maximum thickness of six inches (6"). Select fill materials shall be a good quality silty or clayey sand, free of roots, shells, or any other foreign matter, and shall have and AASHTO Group Classification of A-2-4. In-

situ materials removed during excavation maybe used as select fill if the in-situ materials meet the requirements stated above.

2.02 CLEAN SAND

Clean sand shall be used for pipe bedding, pipe backfill and backfill around subsurface structures. Additionally, clean sand shall be used as backfill material under streets, state highways and driveways. Clean sand materials shall be a good quality "River Sand", free of roots, shells, or any other foreign matter, and shall have and AASHTO Group Classification of A-3.

2.03 CRUSHED LIMESTONE

- A. Pipe Foundations: When soft and/or saturated soils are present in the trench bottom, a crushed limestone pipe foundation shall be used to stabilize the trench bottom. Crushed limestone used as pipe foundation material shall be from a source approved by the LA DOTD. Materials shall conform to the LA DOTD gradation for #57 crushed aggregates. Relative densities of 75% to 90%, in accordance with ASTM D 4253 and D4254, shall be required for pipe foundation.
- B. Structural Bedding: Manholes, wet wells, and valve vaults shall be bedded on a crushed limestone base. Crushed limestone used as bedding material shall be from a source approved by the LA DOTD. Materials shall conform to the LA DOTD gradation for #57 crushed aggregates. Relative densities of 75% to 90%, in accordance with ASTM D 4253 and D4254, shall be required.

2.04 GEOTEXTILE FABRIC

The contractor shall furnish geo-textile fabric that conforms with Section 1019 of the Louisiana Standard Specifications for Roads and Bridges, placed in accordance with the details shown on the plans.

2.05 GEO-GRID

The contractor shall furnish a bi-axial geo-grid to be used along the trench bottom and as shown on the Standard Details. Geo-grid shall be a Tensar BX1200 or Syntec SBX12. The contractor shall submit product data other geo-grid materials to the Engineer for review and approval prior to the start of construction.

PART 3 - EXECUTION

3.01 INSPECTION

- A. The Contractor shall verify that preceding work affecting work of this Section has been satisfactorily completed.

B. Correct conditions adversely affecting work of this section.

3.02 REMOVAL OF UNSUITABLE MATERIALS

A. The Contractor shall remove unsuitable material from within the limits of the work specified in this section.

B. Materials meeting requirements for approved fill for pipe installations shall be stockpiled as necessary and in such a manner satisfactory to the Engineer. Excavated material will not be allowed as backfill material around structures.

C. All material excavated shall be placed so as to minimize interference with public travel and to permit proper access for inspection of the work.

END OF SECTION

SECTION 02221

EARTH EXCAVATION AND BACKFILL IN TRENCHES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This section includes, except as elsewhere provided, trenching for installation of pipelines and appurtenances, including drainage, filling, backfilling, disposal of surplus material and restoration of trench surfaces.
- B. Excavation shall extend to the width and depth shown on the drawings or as specified; or where not specified, Contractor shall confine his excavation to the least width practicable and shall provide suitable room for installing pipe, structures, and appurtenances.
- C. The contractor shall furnish and place all sheeting, bracing, and supports and shall remove from the excavation all materials which are unsuitable for backfill or which the Engineer may deem unsuitable for backfilling. The bottom of the excavation shall be firm, dry, and in all respects, acceptable. The Contractor shall deposit limestone for pipe bedding, or limestone refill for excavation below grade, directly on the bottom of the trench immediately after excavation has reached the proper depth and before the bottom of the trench has become softened or disturbed by any cause whatever.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01390: Excavation Plan
- B. Section 02160: Sheeting, Shoring, and Bracing
- C. Section 02220: Excavation, Backfill, Fill and Grading for Structures

PART 2 - PRODUCTS

2.01 SELECT FILL

Select fill shall be used as backfill material for trenches in unpaved and un-improved areas. Select fill materials shall be a good quality silty or clayey sand, free of roots, shells, or any other foreign matter, and shall have an AASHTO Group Classification of A-2-4. In-situ materials removed during excavation may be used as select fill if the in-situ materials meet the requirements stated above.

2.02 CLEAN SAND

Clean sand shall be used for pipe bedding and pipe backfill. Additionally, clean sand shall be used as backfill material under streets, state highways and driveways. Clean sand materials shall be a good quality "River Sand", free of roots, shells, or any other foreign matter, and shall have and AASHTO Group Classification of A-3.

2.03 CRUSHED LIMESTONE PIPE FOUNDATION

When soft and/or saturated soils are present in the trench bottom, a crushed limestone pipe foundation shall be used to stabilize the trench bottom. Crushed limestone used as pipe foundation material shall be from a source approved by the LA DOTD. Materials shall conform to the LA DOTD gradation for #57 crushed aggregates. Relative densities of 75% to 90%, in accordance with ASTM D 4253 and D4254, shall be required for pipe foundation.

2.04 GEOTEXTILE FABRIC

The contractor shall furnish geo-textile fabric that conforms with Section 1019 of the Louisiana Standard Specifications for Roads and Bridges, placed in accordance with the details shown on the plans.

2.05 GEO-GRID

The contractor shall furnish a bi-axial geo-grid to be used along the trench bottom and as shown on the Standard Details. Geo-grid shall be a Tensar BX1200 or Syntec SBX12.

PART 3 - EXECUTION

3.01 EXCAVATION

- A. Excavation shall be open cuts with vertical sides using sheeting and bracing as required, all sheeting and bracing for excavations shall be in accordance with OSHA regulations.
- B. In case the excavation for any pipeline, is ordered by the Engineer to be carried below the required depth, the Contractor shall fill the bottom of the excavation up to grade with bedding material, in a manner acceptable to the Engineer.
- C. If the Contractor excavates below grade through error or for his own convenience, or through failure to properly dewater the trench, or disturbs the subgrade before dewatering is sufficiently complete, he may be directed by the Engineer to excavate below grade as set forth in the preceding paragraphs; in which case the work of excavating below grade and finishing and placing the refill shall be performed at the Contractor's expense.
- D. All material excavated shall be placed so as to minimize interference with public

travel and to permit proper access for inspection of the work.

3.02 DISPOSAL OF MATERIALS

- A. Excavated material shall be stacked without excessive surcharge on the trench bank or obstructing free access to hydrants and valves. Inconvenience to traffic and abutters shall be avoided as much as possible. Excavated material shall be segregated for use in backfilling as specified below.
- B. All excavated material which is either unsuitable for backfill or which will not be used for backfill in the same location (i.e., streets) shall be removed from the site of the work by the Contractor. The Contractor shall remove and dispose of excess backfill material, at his expense.
- C. Should conditions make it impracticable or unsafe to stack material adjacent to the trench, the material shall be hauled and stored at a location provided by the Contractor. When required, it shall be re-handled and used in backfilling the trench or hauled to the owner's storage site.

3.03 EXCAVATION TO REMOVE STUMPS, ROOTS, LOGS

- A. Stumps, roots, and logs, which are encountered within the trench area, shall be cut to a depth of one foot (1') below the bottom of the trench. The Contractor shall fill this excavated space with bedding material.
- B. When so required by the Engineer, the Contractor shall probe one foot (1') below the established bottom of the trench. If any stump, roots, logs, etc., are discovered by this probing, the Contractor shall cut them out just as if they had been visible in the trench.
- C. Blasting will not be allowed for the removal of stumps.

3.04 TEST PITS

Test pits for the purpose of locating underground utilities or structures in advance of the construction may be excavated by the Contractor. Test pits shall be backfilled immediately after the desired information has been obtained. The backfilled surface shall be restored and maintained in a manner satisfactory to the Engineer. No additional compensation will be made for any test pits or restoration and shall be considered incidental to the appropriate bid item.

3.05 PLACEMENT OF BEDDING MATERIAL

- A. Bedding shall conform to the details on the drawings. When laying pipe, the groove for the pipe and bell hole must be accurately shaped, and the bedding material must be closely packed under and around the pipe.

- B. The bedding and pipe shall be enclosed in a geotextile fabric meeting the requirements of section 2.05 of this specification. Geotextile fabric shall be installed in accordance with the manufacturer's recommendations.

3.06 BACKFILL

- A. As soon as practical after the pipe has been laid and jointed, backfill material (free from stones, pieces of lumber, and other foreign material) shall be hand placed and hand tamped to a depth over the top of the pipe as shown on the drawings.
- B. Where the pipes are laid in developed areas, the trench shall be filled with approved backfill material to an elevation six inches (6") below the existing grade. The remainder of the trench shall be filled with top soil.
- C. Where the pipes are laid in streets, the remainder of the trench above the bedding and up to the bottom of the specified paving shall be backfilled as shown on the drawings in layers not to exceed 2 feet, and shall be compacted to minimum 97% of maximum dry density at optimum water content in accordance with ASTM D-1557.
- D. Backfill around manholes shall be compacted by flooding. All backfill shall be compacted, especially under and over pipes connected to the manholes.
- E. Paving shall not be placed in backfill.
- F. All road surfaces adjacent to back-filling operations shall be broomed and hose-cleaned immediately after backfilling. Dust control measures, as specified under Section 01560, shall be employed at all times.

3.07 RESTORING TRENCH SURFACE

- A. Where the trench occurs adjacent to paved streets, in shoulders, sidewalks, or in cross-country areas, the Contractor shall thoroughly consolidate the backfill and shall maintain the surface as the work progresses. If settlement takes place, he shall immediately deposit additional fill to restore the level of the ground.
- B. The surface of any driveway or any other area which is disturbed by the trench excavation, and which is not a part of the paved street, shall be restored by the Contractor to a condition at least equal to that existing before work began.
- C. In sections where the pipeline passes through grassed areas, the Contractor shall re-grade and re-sod all disturbed areas.

3.08 PROTECTION

Guard rails, curbing, and fencing in the vicinity of the Contractor's operations shall be

adequately protected and, if necessary, removed and restored after backfilling. All curbing, fencing, or guard rails which are damaged during construction shall be replaced with material fully equal to that existing prior to construction.

END OF SECTION

SECTION 02272

GEOTEXTILE FABRIC

PART 1 - GENERAL

1.01 SCOPE

This work consists of furnishing all labor, materials, equipment and incidentals required to furnish and install the geotextile fabric at the locations shown on the plans, or as directed, in conformance with manufacturer's directions and these specifications.

1.02 SUBMITTALS

The characteristics and properties of the geotextile fabric to be installed shall be submitted to the Engineer prior to the installation of the fabric in accordance with Section 01340.

PART 2 - PRODUCTS

2.01 ACCEPTABLE PRODUCTS

The geotextile fabric should meet or exceed the material requirements for Class C geotextile fabric as presented in Section 1019.01 of the Louisiana Standard Specifications for Roads and Bridges, 2000 Edition.

2.02 MATERIALS

A. The geotextile fabric shall be a woven high strength fabric with high burst and puncture strength. It shall be a woven fabric composed of at least 85% by weight polyester, polyolefins or polyamides. Geotextile fabric shall meet the requirements as shown in the table below:

AOS US Sieve Min. (ASTM D4751)	50
Grab Tensile, lb., Min. (ASTM D4632-86)	130
Elongation, Min. (ASTM D4632-86)	50%
Burst Strength, psi., Min. (ASTM D3787)	210
Trapezoidal Tear, lb., Min. (ASTM D4533)	40
Puncture Resistance, lb., Min. (ASTM D4833)	40
Permittivity Sec min. (ASTM D4491)	1.0
Strength Retained at 150 hr. weatherometer, % min. (ASTM D4632; DOTD TR)	70

- B. The manufacturer of the geotextile fabric shall have been normally engaged in the manufacture of the fabrication of this geotextile fabric for at least five continuous years.

2.03 FABRICATION

The geotextile fabric shall be furnished to the Contractor by the manufacturer as a continuous sheet in the widths required for installation in the trench. The length of each sheet shall be such that the total numbers of sheets to be joined in the field are minimized.

PART 3 - EXECUTION

3.01 HANDLING

- A. The Contractor shall handle and store the sheets in accordance with the recommendations of the manufacturer to avoid any damage. Geotextile fabric shall be stored such that it is not exposed to sunlight.
- B. Damaged geotextile fabric will not be acceptable for installation until and unless it has been replaced to the satisfaction of the Engineer.

3.02 INSTALLATION

- A. The geotextile fabric shall be placed without folds or wrinkles and in accordance with manufacturer's recommendations. Laps shall be as recommended by the manufacturer but in no case shall be less than 24".
- B. The recommendations of the manufacturer shall be followed during the installation of the fabric. Care shall be taken during pipe laying, embedment and backfilling operations to avoid damage to the geotextile fabric. Any portion of the fabric damaged during installation shall be removed and replaced or repaired to the satisfaction of the Engineer prior to continuing the installation of the geotextile fabric.
- C. Field Joints. The number of field joints shall be minimized. Lap joints shall be used to join sections in the field.

END OF SECTION

SECTION 02350

STONE BASE COURSE

PART 1 - GENERAL

This material shall meet the requirements of Sections 1003.02, 1003.01 and 1003.03(d) (stone or crushed stone) of the latest edition of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges. It shall be compacted to 95% of ASTM D-698. This material shall be used as base course and as temporary street and drainage maintenance.

PART 2 - PRODUCT (NOT USED)

PART 3 - EXECUTION

Contractor is to compact the subgrade to the appropriate density of adjacent ground. He is to install a layer of compacted stone/crushed stone to the thickness, lines and grades shown on the drawings or as directed by the Engineer.

END OF SECTION

SECTION 02500

ROADWAY AND STREET RESTORATION

PART 1 - GENERAL

1.01 DESCRIPTION

This section shall include the construction or reconstruction of all paved and unpaved roadway and walkway areas encountered on the project. This work will include replacement of pavements, shell surfaces, base courses, curbs, gutters and other improvements removed or damaged by the Contractor during the course of his contract.

All construction materials and procedures shall conform to the Louisiana Standard Specifications for Roads and Bridges (DOTD), 2000 Edition and revisions to date, unless otherwise specified.

Also, drawings included in these contract documents reflect "typical roadway restoration details".

Concrete roadway directly affected during construction or damaged as the result of the Contractor's operation shall be removed and replaced from joint to joint unless otherwise directed by the Engineer's approval in consultation with the Department of Public Works.

Bituminous pavement sections replaced shall be saw cut at the limits for removal.

All pavements or other surfacing of roadways, sidewalks, and driveways, which are damaged by the construction activities, shall be replaced to its preconstruction conditions or better.

NOTICE: The Contractor is responsible for notifying the Department of Engineering at St. Tammany Parish Government, at least 24 hours in advance, of any placement of concrete or asphalt.

1.02 SUBMITTALS

The Contractor shall make submittals, for approval by the Engineer, on the following items:

1. Base course material.
2. Asphalt mix design.
3. Concrete mix design.
4. Load transfer devices.
5. Joint material.

PART 2 - MATERIALS

2.01 BASE COURSE

This work consists of furnishing and placing granular material for the roadway base as per plan details and paving schedules, and in accordance with Section 723 and 301 of the Louisiana Standard Specifications for Roads and Bridges, 2000 Edition, unless otherwise specified.

The placement of the road base material shall be confined to the limits of the trench line. If, due to the construction operation, the adjacent base material is disturbed adversely, the Contractor shall remove and replace the material as directed by the Engineer in consultation with St. Tammany Parish Government

Density tests will be taken on the roadway base materials as directed in the general notes on the plans. The Contractor shall not be allowed to restore the roadway until backfill material in the trench area meets or exceeds the following:

Density Requirements (Standard Proctor)

- a. Base Course (sand) - 97%
- b. Base Course (sand) - 97%
- c. Base Course (stone) - 95%
- d. Subbase (sand) - 97%

It will be the Contractor's responsibility to fill void areas in the existing road base material with compacted sand to establish a level uniform surface. This cost shall be included in the unit price for pavement work.

2.02 ASPHALT CONCRETE PAVING

All materials and construction under this section shall conform to Section 501 of the Louisiana Specifications for Roads and Bridges, 2000 Edition, unless otherwise specified. The gradation of the mix shall be Type 3, AC-30 for the Wearing Course and Binder Course, Type 5A, AC-30 for the Base Course as specified in Table 1 of the referenced section. The thickness of each course is as shown in the paving schedule. Saw cutting will be required along the entire limits of the removed asphalt areas.

2.03 CONCRETE PAVEMENT

All materials and construction under this section shall conform to Section 601 of the Louisiana Standard Specifications for Roads and Bridges, 2000 Edition, unless otherwise specified.

All existing concrete curb, walks, and driveways shall be replaced with concrete to the line and grade as directed by the Engineer and to a thickness as indicated on the typical details as shown on the plans. Prior to construction in an area, the Contractor shall adequately

reference the existing curb and other pavement elevations to establish the preconstruction elevation. These pavement elevations shall be submitted to the Engineer for review and possible modification to improve drainage. Portland cement concrete pavement for patching shall be 10" minimum thickness with a base course 8" thick. All concrete used for patching shall be high early strength (3800 psi) concrete (24 hr curing).

The restored paving elevations shall correspond to the elevations established prior to construction in the area, or as modified by the Engineer, to allow for drainage of the area.

Curbs and sidewalks shall be saw cut and removed to the nearest joint scorings. All concrete streets and driveways shall be removed from joint to joint.

Portland Cement Concrete Requirements for roadway pavements and curbs:

- a. Seven (7) sacks of cement per cubic yard
- b. 2" to 4" slump range
- c. The use of Fly Ash in the mix will not be permissible.

The pavement shall not be opened to traffic until a compressive strength of 4,000 psi is attained and in no case shall the pavement be opened to traffic within a three (3) day period after the concrete has been placed.

The final roadway surface finish shall be a "Drag Finish" as defined in the Louisiana Standard Specifications for Roads and Bridges, 2000 Edition, or as otherwise directed by the Department of Public Works.

PART 3 - EXECUTION

3.01 GENERAL

Unless otherwise approved by the Engineer, the kind of pavement to be constructed in replacement work shall correspond with the kind removed from the area. The respective kind of concrete (asphalt or portland cement) shall be placed, shaped, compacted, and finished to establish grade and cross section by practicable means which will result in a dense, uniform-textured pavement. Abutting edges of old pavement shall be trimmed of all loose fragments and shall be painted with asphalt or thoroughly moistened with water, as appropriate, to provide good bond between the old and new pavement.

All manholes within the pavement area shall be isolated (boxed out) by means of an approved circular ring (joint) around them, square or rectangular sections using flexible joint material.

Transverse (expansion or contraction), longitudinal and construction joints shall all be installed in accordance with the standard details included in the contract documents.

In cases where a section of roadway to be restored abuts an existing roadway, all transverse or longitudinal joints shall line up and be of the same type as the existing (expansion, contractions, etc.).

3.02 SPECIAL PAVING REQUIREMENTS

To provide for the comfort and safety of the traveling public, it is the Contractor's responsibility to backfill, with sand/shell material, up to the top of the adjacent pavement and maintain it at that elevation until the roadway is closed to traffic during the street restoration work.

Maintenance shall consist of re-grading a temporary sand/shell surface material and of restoring said surface to proper grade and cross section daily or more frequently, as directed by the Engineer, together with wetting as required for dust abatement.

At the time of placing the pavement, excess foundation material shall be removed and shall be disposed of in a satisfactory manner. Paving of any area shall be completed on the day it is started, and the area shall be placed in service at the earliest practicable time. The Contractor is responsible for maintaining access to the residents of the area and shall inconvenience the affected property owners as little as possible.

At no time shall pavement material be placed in water or on saturated base material.

All work to be performed under this section shall be conducted with regard for public safety and maintaining traffic flow.

3.03 CUTTING OF PAVEMENT FOR TRENCH PATCHES

Concrete pavement sections shall be removed joint to joint for trench work. Asphalt pavement structures shall be cut with a concrete saw along each edge of the area to be removed with the area being limited in width as shown in the plans.

Cuts shall be clean, vertical cuts made true to lines parallel to or at right angles of any existing curb line. Depths of the cuts shall be full-depth to permit the removal of pavement between or alongside them without damage to pavement or structures to be left in place. Any pavement damaged by the Contractor's operation shall be replaced at the Contractor's expense.

3.04 CURBS, GUTTERS, AND MISCELLANEOUS

Replacement of curbs, gutters, walks, and other like structures shall consist of similar and matching construction to that of adjoining undisturbed structures, which construction shall be at least equal in all respects to that of the structures or parts of structures removed in the work and as shown on the plans.

3.05 TESTING REQUIREMENTS

A. Asphalt Roadways

1. One base thickness verification per 600 square yards or fraction thereof.
2. One density test on the subbase (if applicable) and base material per 600 square yards or fraction thereof.
3. One pavement core for thickness verification per 600 square yards of pavement or fraction thereof.

B. Concrete Roadways

1. One slump test minimum per 100 cubic yards of concrete or fraction thereof.
2. Four (4) cylinders minimum per 100 cubic yards of concrete or fraction thereof.
3. Independent densities, slumps, cylinders, cores, etc., will be required for isolated areas.
4. All requirements of 3.05A above shall also apply to concrete roadways.

C. All initial testing shall be performed by the Parish's testing laboratory and at the Parish's expense. All costs for testing to determine compliance after the initial tests shall be borne by the Contractor and credit made to the Owner under change order to the contract.

D. There shall be no adjustment in bid prices for pavement thickness deficiencies. If the concrete core is less than specified, two additional cores on the same slab within a 5' radius must be taken. If one of these cores is less than specified, then the entire panel (joint to joint) must be removed and additional cores on other adjacent panels within the core range (600 square yards) must be taken and the same procedure followed.

E. Joint Sealer: All joints in roadway surface shall be cleaned and sealed with approved joint sealant.

3.06 CLEANING FOR ACCEPTANCE OF STREET

Prior to acceptance, the Contractor shall be required to clean up any street that is dirtied as a result of construction activity, as directed by the Project Engineer.

END OF SECTION

SECTION 02505

HORIZONTAL DIRECTIONAL DRILL

PART 1 GENERAL

1.01 SCOPE OF WORK

The work specified in this section consists of furnishing and installing underground utilities using the horizontal directional drilling (HDD) method of installation for pipes of various sizes, also commonly referred to as directional boring or guided horizontal boring. This work shall include all services, equipment, materials, and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection and restoration.

1.02 CONTRACTOR QUALIFICATIONS

- A. Contractor (or Sub-Contractor) shall provide documented evidence of successful installation of pipe through the horizontal directional drill method for work comparable in nature to the scope of work required by this project for a minimum of two years.
- B. Contractor (or Sub-Contractor) to have successfully self-performed at least (5) horizontal directional drilling projects to install product pipe of a similar nominal diameter and length to the proposed project within the past two years. Owner and Engineer shall have the sole authority to determine the adequacy of the representative projects.
- C. Contractor's (or Sub-Contractor's) project manager, superintendent, drill operator and guidance system operator assigned to horizontal directional drilling shall be experienced in work of this nature and shall have successfully completed projects similar in nature and shall have successfully completed similar projects using horizontal directional drilling. Contractor (or Sub-Contractor) shall submit substantiating evidence of qualifications with the bid submittal documents.
- D. All drilling, drill guidance and pipe joining equipment operators shall be experienced in comparable horizontal directional drilling work, and shall have been fully trained in the use of the proposed equipment by an authorized representative of the equipment manufacturer(s) or their authorized training agents.
- E. All high density polyethylene (HDPE) fusion equipment operators shall be qualified to perform pipe joining using the means, methods and equipment employed by the Contractor. Fusion equipment operators must possess and be able to provide written validation (card or certificate) of current, formal training on all fusion equipment employed on the project, including training and proper use of the

data logging device on the equipment. Training received more than two years prior to operation of the fusion equipment shall not be considered current.

1.03 REFERENCED STANDARDS

- A. American Water Works Association (AWWA) latest edition:
 - 1. AWWA C651 – Disinfecting Water Mains
 - 2. AWWA C901 – Polyethylene Pressure Pipe and Tubing, ½ Inch Through 3 Inch for Water Service
 - 3. AWWA C906 – Polyethylene Pressure Pipe and Fittings, 4 Inch Through 63 Inch for Water Distribution and Transmission

- C. American Society of Civil Engineers (ASCE) – Manual of Practice 108 for Pipeline Design for Installation by Directional Drilling

- B. American Society for Testing and Materials (ASTM) latest edition:
 - 1. ASTM D638 – Tensile Method for Tensile Properties of Plastics
 - 2. ASTM D790 – Test Materials for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
 - 3. ASTM D2122 – Standard Method of Determining Dimensions of Thermoplastics Pipe and Fittings
 - 4. ASTM D2239 – Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
 - 5. ASTM D2657 – Practice for Heat-Joining of Polyolefin Pipe and Fittings
 - 6. ASTM D2683 – Standard Specification for Socket Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
 - 7. ASTM D2774 – Standard Practice for Underground Installation of Thermoplastic Pressure Piping
 - 8. ASTM D2837 – Standard Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
 - 9. ASTM D3035 – Polyethylene (PE) Plastic Pipe (DR-PE) Based on Controlled Outside Diameter
 - 10. ASTM D3261 – Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
 - 11. ASTM D3350 – Polyethylene Plastic Pipe and Fittings Material
 - 12. ASTM F412 – Standard Terminology Relating to Plastic Piping Systems
 - 13. ASTM F714 – Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
 - 14. ASTM F905 – Standard Practice for Qualification of Polyethylene Saddle-Fused Joints
 - 15. ASTM F1055 – Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing

16. ASTM F1056 – Standard Specification for Socket Fusion Tools for Use in Socket Fusion Joining Polyethylene Pipe or Tubing and Fittings
17. ASTM F1290 – Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings
18. ASTM F1962-11 – Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings
19. ASTM F2164 – Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
20. ASTM F2206 – Fabricated Fittings for Butt-Fused Polyethylene Plastic Pipe
21. ASTM F2620 – Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
22. ASTM F2786 – Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Gaseous Testing Media Under Pressure (Pneumatic Leak Testing)
23. ASTM F3124 – Standard Practice for Data Recording the Procedure used to Produce Heat Butt Fusion Joints
24. ASTM F3190 – Standard Practice for Heat Fusion Equipment (HFE) Operator Qualifications on Polyethylene (PE) and Polyamide (PA) Pipe and Fittings

D. North American Society for Trenchless Technology (NASTT) latest edition:

1. NASTT's Horizontal Direction Drilling (HDD) Good Practices Guidelines – 4th Edition

E. Plastics Pipe Institute (PPI) latest edition:

1. The Plastics Pipe Institute Handbook of Polyethylene Pipe – Chapter 12 Horizontal Directional Drilling
2. PPI – TN-36 – General Guidelines for Connecting HDPE Potable Water Pressure Pipes to DI and PVC Piping Systems
3. PPI – TN-38 – Bolt Torque for Polyethylene Flanged Joints
4. PPI – TN-44 – Long Term Resistance of AWWA C906 Polyethylene (PE) Pipe to Potable Water Disinfectants
5. PPI – TN-45 – Mechanical Couplings for Joining Polyethylene Pipe
6. PPI – TN-46 – Guidance for Field Hydrostatic Testing of High Density Polyethylene Pressure Pipelines: Owner's Considerations, Planning, Procedures, and Checklists
7. PPI – TN-49 – Recommendations for AWWA C901 Service Tubes in Potable Water Applications
8. PPI – TN-54 – General Guidelines for Squeezing Off Polyethylene Pipe in Water, Oil and Gas Applications
9. PPI – TR-46 – Guidelines for Use of Mini-Horizontal Directional Drilling for Placement of High Density Polyethylene Pipe

- F. Plastics Pipe Institute Municipal Advisory Board (MAB)
 - 1. MAB Generic Electrofusion Procedure for Field Joining of 12 Inch and Smaller Polyethylene (PE) Pipe
 - 2. MAB Generic Electrofusion Procedure for Field Joining of 14 Inch to 30 Inch Polyethylene (PE) Pipe
 - 3. MAB Model Specifications for PE 4710 Buried Potable Water Service, Distribution and Transmission Pipes and Fittings

1.04 SUBMITTALS

- A. Contractor shall submit personnel information detailing the names and resumes, including specific project experience, for the proposed project manager, superintendent, guidance operator and drill operator proving that the experience meets the requirements detailed in this specification.
- B. Contractor shall submit personnel information, including specific project experience, for all proposed drilling, drill guidance, and pipe joining equipment operators, including evidence of training in the use of the proposed equipment by an authorized representative of the equipment manufacturer or their qualified agent.
- C. Provide technical data for the equipment to be used on the project, including make, model and technical specifications for each of the following:
 - 1. Horizontal directional drill rig
 - 2. Drilling system components
 - 3. Downhole drilling assembly and reaming equipment
 - 4. Downhole pressure sub
 - 5. Guidance and control system
 - 6. Pulling head
 - 7. Swivels
 - 8. Rollers
 - 9. Solids separation and drill fluid recirculation systems
 - 10. Pipe fusion equipment
 - 11. Pipe fusion data logger
 - 12. Pipe handling equipment
 - 13. Pigs and pigging equipment
 - 14. Calibration certification for the pilot bore guidance and control system
 - 15. Calibration certification for the heat fusion datalogger
- D. Submit pipe catalog information confirming that pipe, fittings, joints, and other materials conform to the requirements of the specifications.
- E. Submit pipe manufacturer's most current calculations regarding tensile load limitations for trenchless installations.

- F. Provide information showing staging and pipe fusion areas, site access during work activities, pipe storage and handling and procedure for pipe joining.
- G. Submit a proposed bore path layout in both plan and profile. The proposed bore path shall conform to the drilling equipment and pipe material constraints.
- H. Provide a work plan detailing the procedure and schedule to be used to execute the project. Horizontal directional drilling shall not commence until the contractor has received written approval of all work plan submittals. The Contractor shall provide complete descriptions of proposed plans, procedures and personnel, as well as supporting calculations for the following:
 - 1. Drilling operations, addressing procedures for pilot hole drilling and reaming, tracking and controlling the drilling head locations and the preparation of as-built documentation
 - 2. Drilling fluid management
 - 3. Spoils handling and disposal
 - 4. Pipe pullback and pullback monitoring.
 - 5. Prevention of inadvertent fluid losses and spills, including contingencies for rapid containment and cleanup, including procedures for monitoring and controlling drilling fluid flows and pressures, equipment, resources and procedures for identifying, containing and cleaning up fluid losses and spills
 - 6. Quality control and testing procedures
 - 7. Safety plan
- I. Provide a supplemental work plan in advance of performing the horizontal directional drill work. Horizontal directional drilling shall not commence until the contractor has received written approval of all supplemental work plan submittals. The work plan shall specifically address the following potential problems:
 - 1. Obstructions along bore path during reaming or pull back
 - 2. Drill pipe or product pipe cannot be advanced
 - 3. Deviations from design line and grade exceed allowable tolerances
 - 4. Drill pipe or product pipe broken off in borehole
 - 5. Collapse of product pipe or excessive deformation
 - 6. Damage to existing utilities
 - 7. Excessive subsidence or heave
- J. Design Requirements
 - 1. Horizontal alignment shall be as shown on the project documents. The maximum depth shall be determined based on a minimum clearance from existing or proposed utilities to be crossed or the minimum clearances shown on the Drawings, whichever is greater. Bending radius shall not be less than the manufacturer's recommended minimum bending radius of the pipe. Compound curvatures may be used, but shall not exceed the

maximum deflections as set forth by the manufacturer or AWWA standards, whichever is more strict.

2. In accordance with ASTM F1962-11, Bore Entry (Pipe exit) angle shall be between 8 and 20 degrees and Bore Exit (Pipe Entry) angle shall be relatively shallow, preferably less than 10 degrees. Any deviation from these angles should be submitted to the Owner for approval.
- K. Provide detailed design calculations in accordance with ASTM F1962. The calculations shall support the Contractor's specific proposed means, methods and products. The Contractor's final design calculations shall be prepared and sealed by a Licensed Professional Engineer registered in the State as to which the Project is located. Horizontal directional drilling shall not commence until the contractor has received written approval of all design calculation submittals. Design calculations shall demonstrate that the proposed pipe, equipment and means and methods comply with the requirements of this specification and have been designed based on the design borepath, installation means and methods, for anticipated installation and handling, hydrostatic, earth and live loads, installation temperature and site conditions. Contractor shall provide the following calculations:
1. Maximum allowable pipe loading limits
 2. Design radius of the proposed bore path, including minimum radii for all curves
 3. Pullback load calculation based on proposed drill path plan and profile including pipe stress calculations
 4. Confirmation that the design parameters do not result in installation stress that exceeds allowable pipe stresses
 5. Bouyancy effect calculations (if applicable)
 6. Effects of ballasting plan on pipe pullback forces (if applicable)
 7. Hydrofracture analysis
- L. Contractor shall provide a plan to locate and protect all adjacent utilities and infrastructure.
- M. Submit traffic control plan for all entrance and exit pits.
- N. Submit bore logs that clearly indicate the pipe diameter, location (by station), and depth below grade of the installed pipeline, recorded every 10 feet maximum along the pipeline. Submit within 7 days of the completion of each bore.
- O. Provide as-built documentation. Contractor shall plot as-built conditions on the field drawings, including the location in plan and elevation of the drill string, reaming head, and installed pipe, at the completion of each production shift. Include on the drawings pipeline horizontal and vertical data recorded every 10 feet along the pipeline or once per joint of drill pipe.

P. Contractor to maintain all testing and quality control documentation and assurance procedures. Contractor to provide the following documents to the Owner:

1. Quality control test reports
2. Fusion reports for each weld as reported by the datalogger

1.05 UTILITY LOCATING

- A. The Contractor shall be responsible for following the procedures in this specification to identify, locate and verify the presence of existing utilities along the route of the proposed pipeline or work areas.
- B. Utility locating will be performed in three parts: identification, designating and verification.
1. Utility Identification – Identify the presence of underground utilities through Florida One Call service and visual observation of surfacemarkers or other indicators such as manholes, valve boxes, fire hydrants, etc.
 2. Utility Designation – Marking the location of underground utilities with paint or flags based on utility owner information or third party locating equipment.
 3. Utility Verification – Verification of Utility Identification and Designation by excavation or other methods to determine the horizontal and vertical location of the underground utility. This also provides the size and material of the underground utility. Approved methods to accomplish this task include vacuum excavation, potholing, and test holes with traditional equipment (backhoes, etc.)
- C. The Contractor shall record the location (horizontal and vertical) of all known utilities, as defined within this specification, on the project documents. At a minimum, utilities shall be located by station and offset from the project baseline or with state plan coordinates. Vertical location can be based on depth from existing grade or elevation using the project vertical datum.
- D. The project documents showing all known existing utilities shall be submitted to the Owner's Representative for review and to document, prior to construction, the known utilities within the project limits. The Owner's Representative will have a five (5) working day period to review and approve or comment on the utility locations.
- E. The approved project documents showing the existing utilities shall be the basis for changes to the contract as addressed within these specifications.
- F. Utilities located and documented as described above then subsequently damaged by the Contractor under this contract will have no basis for claims against the Owner for costs associated with repairs, delays, etc.

- G. Damage to existing underground utilities that were not identified by the procedures noted above will be the utility owner's responsibility to repair or replace.

PART 2 PRODUCTS

2.01 POLYETHYLENE PIPE, FITTINGS AND ACCESSORIES

- A. Polyethylene pipe and fittings 4-30 inch diameter shall be in accordance with AWWA C906, material designation code of PE4710 and all applicable ASTM standards.
- B. Polyethylene pipe ½ -3 inch diameter for main line piping shall be polyethylene pipe (not tubing) in accordance with AWWA C901, material designation code of PE4710 and all applicable ASTM standards.
- C. Butt fusion fittings shall be made of HDPE material with a minimum material designation code of PE4710 and all applicable ASTM standards. Molded and fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified on the project documents. All fittings shall meet the requirements of AWWA C901, C906 and all applicable ASTM standards. Markings for molded fittings shall comply with the requirements of ASTM D3261. Fabricated fitting shall be marked in accordance with ASTM F2206. Socket fittings shall meet ASTM D2683. Fabricated fittings shall be manufactured using a McElroy DataLogger to record fusion time, pressure and temperature, and shall be marked with a unique joint identifier that corresponds to the joint report. A graphic representation of the time and pressure data for all fusion joints made producing fittings shall be maintained for a minimum of five years as part of quality control and will be available upon request of owner.
- D. Electrofusion fittings shall be made of HDPE material with a minimum material designation code of PE4710 and meet ASTM F1055. Electrofusion fittings shall have a pressure rating equal to the pipe unless otherwise specified on the project documents. All electrofusion fittings shall be suitable for use as pressure conduits and have nominal burst values of four times the working pressure rating of the fitting. Marking of electrofusion fittings shall comply with the requirements of ASTM F1055. All electrofusion fittings shall be properly stored in compliance with the manufacturers recommendation.
- E. Saddle fusion could be used to fuse branch saddles, tapping tees and other HDPE fittings onto the wall of the main pipe. Saddle fusion shall be done in accordance with ASTM F2620 or PPI TR-41 or the fitting manufacturer's recommendations. Saddle fusion joints shall be made by qualified fusion technicians. Qualification of the fusion technician shall be demonstrated by evidence of fusion training within the past two years on the equipment to be utilized on this project in accordance with ASTM F3190.

- F. Socket fusion could be used to fuse branch saddles, tapping tees and other HDPE fittings onto the wall of the main pipe. Socket fusion shall be done in accordance with ASTM D2683 or the fitting manufacturer's recommendations. Socket fusion joints shall be made by qualified fusion technicians. Qualification of the fusion technician shall be demonstrated by evidence of fusion training within the past two years on the equipment to be utilized on this project in accordance with ASTM F3190. All equipment used for socket fusion should comply with ASTM F1056 and manufacturer's recommendations.
- G. Flanges and Mechanical Joint Adapters (MJ) shall have a minimum material designation code of PE4710 and meet all applicable AWWA and ASTM standards. Flanged and MJ adapters can be made to ASTM D3261 or machined in compliance with ASTM F2206. Flanges and MJ adapters shall have a pressure rating equal to the pipe unless otherwise specified on the project documents. Markings for molded or machined flange adapters or MJ adapters shall be per ASTM D3261. Fabricated (including machined) flange adapters shall be marked per ASTM F2206. Installation of all Flanged adapters shall follow the guidelines of the Plastics Pipe Institute TN-38.
- H. Glands, bolts, and gaskets shall be manufactured in accordance with AWWA C153. Bolts and nuts shall be grade 2 or higher.

2.02 PIPELINE IDENTIFICATION

- A. All polyethylene pipe shall be marked in accordance with the standards to which it is manufactured.
- B. All polyethylene pipe shall be black, and shall contain a continuous colored stripe, 2 inches wide, located at no greater than 90 degree intervals around the pipe. Stripes shall be impregnated or molded into the pipe by the manufacturer. Application of the stripes after manufacture is not acceptable. Stripe color shall be:
 - 1. Potable Water Mains - blue stripes
 - 2. Reclaimed Water Mains - purple stripes
 - 3. Force Mains - brown stripes
 - 4. Sanitary Sewer - green stripes
 - 5. Storm Sewer - no stripes required

2.03 TRACER WIRE

- A. Installation of Tracer Wire. The Contractor shall be required to install tracer wire during the horizontal directional drilling operations including along all pits for connections. The tracer wire shall be installed simultaneously with the PE piping system. Tracer wire shall be properly spliced at each end connection and each service connection. Care should be taken to adequately wrap and protect wire at

all splice locations. No bare tracer wire shall be accepted. Provide Magnesium alloy anode for cathodic protection that conforms to the requirements of ASTM B843. Install tracer wire per local and manufacturer's requirements. A minimum of three separate tracer wires shall be installed with the Directional Bore. Contractor shall be required to provide as many wires as necessary to maintain continuity throughout the length of the directional bore. Failure of continuous continuity in the locating wire shall result in abandonment and reinstallation of the directional drill, at the discretion of the Owner.

1. Tracer wire shall be three (3) 3/16-inch, 7 x 7 (or stronger) Stranded Copper Clad Steel Extreme Strength with 4,700 lb. break load, or braided stainless steel (A304 or A316), with minimum 50 mil HDPE insulation thickness.

2.04 DRILLING FLUIDS

- A. All drilling fluids should be a bentonite slurry mixture with any applicable amendments as determined by the drill operators.

2.05 DELIVERY, STORAGE AND HANDLING OF MATERIALS

- A. Contractor is required to inspect materials delivered to the site for damage. All materials found during inspection or during the progress of work to have cracks, flaws, or other defects shall be rejected and removed from the job site without delay.
- B. Contractor is responsible for obtaining, transporting and sorting any fluids, including water, to the work site.
- C. Contractor is responsible for disposal of fluids on the project site. The disposal of fluids shall be done in compliance with all permits and applicable federal, state or local environmental regulations. The bentonite drilling slurry may be recycled for reuse in the hole opening operation, or shall be hauled by the Contractor to an approved location or landfill for proper disposal. Contractor shall thoroughly clean the project area or any fluid residue upon completion of installation and replace any and all plants and sod damaged, discolored or stained by drilling fluids.

PART 3 EQUIPMENT

3.01 GENERAL

- A. The directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore and pullback the pipe, a drilling fluid mixing, delivery and recovery system of sufficient capacity to successfully complete the drill, a drilling fluid recycling system to remove solids from the drilling fluid so that the fluid can be re-used, a guidance system to accurately guide boring operations, a vacuum truck of sufficient capacity to handle the drilling fluid volume

and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of the project.

3.02 DRILLING SYSTEM

- A. Drilling Rig – the directional drilling machine shall consist of a power system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The power system shall be self contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drilling string and an audible alarm which automatically sounds when an electrical current is detected.
- B. Drill Head – the drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

3.03 GUIDANCE SYSTEM

The guidance system used shall provide real time electronic data to the inspector on request. All daily data and project data shall be displayed on the As-built documentation. The guidance system shall be capable of tracking a depth of 40 feet or 20 feet below design bore path, whichever is greater, and in any soil condition, including hard rock. It shall enable the driller to guide the drill head by providing immediate information on the tool face, azimuth (horizontal direction,) and inclination (vertical direction.) The guidance system shall be accurate to +/- 2% of the vertical depth of the borehole at sensing position at depths up to one hundred feet and accurate within 2 feet horizontally.

The Guidance System shall be of a proven type and shall be operated by personnel trained and experienced with this system. The equipment operator shall be aware of any magnetic anomalies on the surface of the drill path and shall consider such influences in the operation of the guidance system if using a magnetic system.

- A. Bore Tracking and Monitoring – at all times during the pilot bore, the Contractor shall provide and maintain a bore tracking system that is capable of accurately locating the position of the drill head in the x, y, and z axes. The Contractor shall record these data at least once per drill pipe length or every twenty-five (25) feet, whichever is more frequent.
- B. Downhole and Surface Grid Tracking System – the Contractor shall monitor and record x, y, and z coordinates relative to an established surface survey bench mark.

The data shall be continuously monitored and recorded at least once per drill pipe length or at twenty-five (25) feet, whichever is more frequent.

- C. Deviations between the recorded and design bore path shall be calculated and reported on the daily log. If the deviations exceed the allowable tolerances from the design path, such occurrences shall be reported to the Owner. The Contractor shall undertake all necessary measures to correct deviations and return to design line and grade.
- D. Drilling Fluid Pressures and Flow Rates – Drilling fluid pressures and flow rates shall be continuously monitored and recorded by the Contractor. The pressures shall be monitored at the pump. These measurements shall be made during pilot bore drilling, reaming and pullback operations.

3.04 DRILLING FLUID (MUD) SYSTEM

- A. Mixing System – a self contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid. Mixing system shall continually agitate the drilling fluid during operations.
- B. Drilling Fluids – drilling fluid shall be composed of clean water, appropriate additives and clay. Water for mixing the drilling fluid shall be potable water, procured by the Contractor. The water and additives shall be mixed thoroughly and be absent of any clumps or clods. Vary the fluid viscosity to best fit the soil conditions encountered. Do not use any other chemicals or polymer surfactants in the drilling fluid without written consent from the Engineer. Certify to the Engineer in writing that any chemicals to be added are environmentally safe and not harmful or corrosive to the facility.
- C. Delivery System – the delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be relatively leak-free. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and conveyed to the drilling fluid recycling system. A berm, minimum of 12” high, shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid cycling systems to prevent spills into the surrounding environment. Pumps and or vacuum truck(s) of sufficient size shall be in place to convey excess drilling fluid from containment areas to storage and recycling facilities.
- D. Drilling Fluid Viscosity – in the event that inadvertent returns or returns loss of drilling fluid occurs during pilot hole drilling operations, the Contractor shall cease drilling, wait at least 30 minutes, inject a quantity of drilling fluid with an appropriate viscosity and then wait another 30 minutes. If mud fracture or returns loss continues, the Contractor shall cease operations and notify the Owner.

- E. Drilling Fluid Recycling System – the drilling fluid recycling system shall separate sand, dirt and other solids from the drilling fluid to render the drilling fluid reusable. Spoils are separated from the drilling fluid will be stockpiled for later use or disposed.
- F. Control of Drilling Fluids – the Contractor shall follow all requirements of the proposed work plan and supplemental work plan as submitted and approved and shall control operations pressures, drilling mud weights, drilling speeds and any other operational factors to avoid hydrofracture fluid losses to formations, and control drilling fluid spillage. This includes any spillages or returns at entry and exit pit locations or at any intermediate point. All inadvertent returns or spills shall be promptly contained and cleaned up. The Contractor shall maintain on-site mobile spoil removal equipment during all drilling, pre-reaming and pullback operations and shall be capable of quickly removing spoils. The Contractor shall immediately notify the Owner of any inadvertent returns or spills and immediately contain and clean up the return or spill.

3.05 OTHER EQUIPMENT

- A. Pipe Rollers – pipe rollers, if used, shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull back operations. Sufficient number of rollers shall be used to prevent excess sagging of pipe.

3.06 DATA LOGGER

- A. A data logger shall be used to record and document all butt fusion process. The data logger must be compatible and outfitted with an electronic data recording device. A digital report or printout for all fusion joints made that complies with, but is not limited to, ASTM F3124 must be delivered to the OWNER upon request and at the completion of the project. All hydraulic fusion must be recorded and able to produce a graphic representation of the time and pressure data. All manual fusion must be recorded with, but not limited to, Joint ID, Operator Name and ID, Pipe information, and Heater Plate Temperature. The recording unit shall be a DataLogger 6 as manufactured by McElroy Manufacturing, Inc, or newer model or approved equivalent.

PART 4 EXECUTION

4.01 GENERAL

- A. Locate positions of entry and exit pits, establish elevation and horizontal datum for bore head control, and lay out pipe assembly area. Lay out and assemble pipe in a manner that does not obstruct adjacent roads, and commercial or residential activities adjacent to construction areas.

- B. Proposed deviations from the bore path due to underground obstructions shall be approved by the Engineer prior to construction.
- C. Horizontal and vertical tolerance of the installed bore path from approved bore path shall be within ± 6 inches in the vertical plane and within ± 2 feet in the horizontal plane.
- D. The maximum allowable pull load determined during the design calculations for the installed Polyethylene pipe system should not be exceeded. If the maximum observed pull load exceeds the maximum allowable pull load, the Owner may request the drill be re-installed with new Polyethylene pipe at the Contractor's expense.
- E. Final acceptance including final payment of directional bored pipelines will not be made until directional bore logs have been submitted and the information on the bore logs documents the depth of the installed pipeline is in accordance with these specifications.

4.02 DIRECTIONAL DRILLING

- A. The installation of pipeline by directional drilling shall be within the limits indicated on the drawings, unless otherwise approved by the Owner or Engineer.
- B. Install erosion control measures and dewater as required.
- C. Steering of the bore must be performed with a method approved by the boring equipment manufacturer. Such methods include walkover, wire line, wire line with surface grid and other accepted methods. Use a locating and tracking system capable of ensuring that the proposed installation is installed as intended. The locating and tracking system must provide information on:
 - 1. Clock and pitch information
 - 2. Depth
 - 3. Transmitter temperature
 - 4. Battery status
 - 5. Position (x,y)
 - 6. Azimuth, where direct overhead readings (walkover) are not possible (i.e. subaqueous or limited access transportation facility)
- D. Ensure proper calibration of all equipment before commencing drilling operation. Take and record alignment readings or plot points such that elevations on top of and offset dimensions from the center of the product to a permanent fixed feature are provided. Such permanent fixed feature must have prior approval of the Owner or Engineer. Provide elevations and dimensions at all bore alignment corrections (vertical and horizontal) with a minimum distance between points of 20 feet. Provide a sufficient number of elevations and offset distances to accurately plot the

vertical and horizontal alignment of the installed product. A minimum of three elevation and plot points are required.

- E. The depth of the directional drilling shall be the minimum necessary to prevent surface heave, unless the drawings require the installation to be at deeper depths. Any proposed changes to the depth of the directional bore from what is shown on the drawings must be approved by the Engineer in writing, prior to commencement of drilling. Where utilities cross under department of transportation (DOT) roads, the depth of cover shall comply with any applicable DOT permits.
- F. Borings shall be conducted using a mechanical boring head, assisted by and cooled by drilling fluid of low pressure and volume. Material Safety Data Sheets must be provided and approved by the Engineer for all drilling slurry compounds.
- G. Back reaming shall be conducted to enlarge and prepare the bore hole for pipe installation. Minimize potential damage from soil displacement or settlement by limiting the ratio of the bore hole to the product size. The size of the back reamer bit or pilot bit, if no back reaming is required, shall be limited relative to the product diameter.
- H. Ensure adequate removal of soil cuttings and stability of the bore hole by monitoring the drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming and pipe installation. Obtain the Engineer's approval of the location and all conditions necessary to construct relief holes to relieve excess pressure and ensure the proper disposition of drilling fluids is maintained.
- I. Minimize heaving during pull back. The pull back rate used shall maximize the removal of soil cuttings without building excess down hole pressure. Contain excess drilling fluids at entry and exit points until they are recycled or removed from the site or vacuumed during drilling operations. Entry and exit pits are to be of sufficient size to contain the expected return of drilling fluids and soil cuttings.
- J. Ensure that all drilling fluids are disposed of or recycled in a manner acceptable to the appropriate local, state, or federal regulatory agencies. If in the drilling process it becomes evident that the soil is contaminated, contact the Engineer immediately. Do not continue drilling without the Engineer's approval.
- K. Install the carrier in the bore hole within the same day that the pre-bore is completed to ensure stability.

4.03 PIPE JOINING

- A. High density polyethylene pipe shall be heat fused and pressure tested as per manufacturer's guidelines before installation in the bore hole. During assembly and

prior to pullback, pipe must be laid out in such a way as to minimize interference to pedestrian and vehicular traffic.

- B. Cuts or gouges that reduce the wall thickness by more than 10% are not acceptable and must be cut out, discarded and the pipe rejoined.
- C. Each butt fusion shall be recorded and logged by a datalogger affixed to the fusion machine. Joint data shall be submitted as part of the As-built documentation.
- D. Mechanical joining – Polyethylene pipe and fittings may be joined together or to other materials by means of flanged connections or mechanical couplings designed for joining polyethylene pipe or for joining polyethylene pipe to another pipe material. Mechanical couplings shall be fully pressure rated and fully thrust restrained and installed in accordance with manufacturer's recommendations.
- E. Install required locator wire along polyethylene pipe prior to pulling through bore hole as per these specifications.
- F. After pulling pipe, clean exposed ends for installation of fittings, test locator wire for continuity.

4.04 BORING FAILURE

- A. If an obstruction is encountered during boring which prevents completion of the installation in accordance with the drawings and specifications, either remove the pipe or abandon the pipe in place at the discretion of the Engineer.
- B. If the pipe cannot be withdrawn and Engineer approves abandoning the pipe in place, cut pipe off at least 3 feet below ground surface, fill annular space and pipe with excavatable flowable fill and cap ends of pipe with blind flange.
- C. In the event of failure to install pipe, retain possession of pipe and remove it from the site.
- D. Upon approval of the Engineer, fill the abandoned bore hole with excavatable flowable fill.
- E. Submit a new installation procedure and revised plans to the Engineer for approval before resuming work at another location.
- F. If, during construction, damage is observed to the facility, cease all work until resolution to minimize further damage and a plan of action for restoration is obtained and approved by the Engineer.
- G. If the submitted boring logs indicate the installed alignment does not meet vertical or horizontal alignment requirements, the boring is considered a failure, and the

directional bored pipeline shall be either re-bored or otherwise remedied at the discretion of the Owner.

4.05 SWABBING

- A. The purpose of swabbing a new pipeline is to conserve water while thoroughly cleaning the pipeline of all foreign material, sand, gravel, construction debris and other items not found in a properly cleaned system. Prior to pressure testing of a new pipeline swabbing shall be utilized as specified on the project documents for each project.
- B. New water, sewer force and reclaimed mains greater than 12" ID (unless determined otherwise by the Owner) shall be hydraulically cleaned with a polypropylene swabbing device to remove dirt, sand and debris from main.
- C. If swabbing access and egress points are not provided in the design drawings, it will be the responsibility of the Contractor to provide temporary access and egress points for the cleaning, as required.
- D. Cleaning of the system shall be done in conjunction with, and prior to, the initial filling of the system for its hydrostatic test.
- E. The line to be cleaned shall only be connected to the existing distribution system at a single connection point.
- F. At the receiver or exit point for the poly swab, the Contractor is responsible for creating a safe environment for collection of debris, water and the swab. Considerations shall be made for protecting surrounding personnel and property and safe retrieval of the swab.

4.06 TESTING

- A. Disinfection tests
 - 1. All water pipe and fittings shall be thoroughly disinfected prior to being placed in service. Disinfection shall follow the applicable provisions of the procedure established for the disinfection of water mains as set forth in AWWA C651. Bacteriological testing on the water main shall be scheduled, completed and sent for water analysis (lab testing.) The results of the lab testing shall be sent to the Owner. No pipeline shall be placed into service until it is properly disinfected and water analysis proves it is disinfected.
 - 2. Temporary blow-offs shall be installed for the purpose of cleaning the water main. Temporary blow-offs shall be removed and plugged after the main is cleared. The main shall be flushed prior to disinfection.

3. The new water main shall be connected to the existing water main at one point only for flushing purposes. The new main MUST have a blow off on the end as required. After the new main is thoroughly flushed, the open end shall be sealed and restrained and the main shall be thoroughly disinfected.

B. Pressure and Leakage tests

1. Conduct hydrostatic pressure testing of installed polyethylene pipe in accordance with ASTM F2164.
2. For HDPE mains, fill the main slowly ensuring fill rate does not exceed capacity of air release devices. Once air has been expelled from the system, gradually raise the pressure to 160 psi. Add makeup water as necessary to maintain this pressure as necessary for 4 hours. After the 4 hour period, reduce main pressure to the 150 psi test pressure and monitor for 1 hour. Do not increase pressure or add makeup water during this one hour period. The test is passed and considered acceptable if the main pressure does not drop more than 5% (7.5 psi) during the one hour period.
3. If any defects or leaks are revealed, they should be corrected and the pipeline retested after a minimum 24 hour recuperation period between tests. Total testing conducted on a section of pipeline shall not exceed 8 hours within a 24 hour period.

4.07 DISPOSAL OF SURPLUS FLUIDS

- A. All drill fluid excess shall be contained in entry and/or exit pits and pumped as needed into additional on-site storage tanks, tanker trucks, vacuum trucks, etc. Dispose of excess drill fluid offsite as allowed by local rules and regulations.
- B. Dispose of all material not needed or not suitable for backfilling over or around the entry and receiving pits. The disposal shall be subject to local codes and regulations.

4.08 RESTORATION

After extraction, drill fluids, pits, work areas, staging and storage areas are to be restored to equal or better condition than pre-construction condition.

END OF SECTION

SECTION 02515

HIGH DENSITY POLYETHYLENE PIPE AND FITTINGS

PART 1 GENERAL

1.01 SCOPE OF WORK

The Contractor shall provide solid wall high density polyethylene pipe (HDPE) and fittings which conform to AWWA, ASTM and other referenced documents listed in this specification with flanged and thermal butt fusion joints complete in place.

1.02 MANUFACTURER QUALIFICATIONS

- A. Manufacturer shall have a minimum of 5 years recent experience producing HDPE pressure pipe and fittings for at least the specified sizes and lengths, and shall be able to submit documentation of at least 5 installations in satisfactory operation for at least 5 years.
- B. HDPE pipe and fittings manufacturers and distributors shall be listed as current members of the Alliance for PE Pipe.
- C. Contractor shall have a minimum of 5 years recent experience installing HDPE pressure pipe and fittings for at least the specified pipe and fittings sizes and lengths and shall be able to submit documentation of at least 5 installations in satisfactory operation for at least 5 years.
- D. All pipe and fittings of each material type shall be furnished by the same manufacturer.
- E. The HDPE utility pipe and fittings manufacturer shall review and approve or prepare all Shop Drawings and other submittals for all components furnished under this Section.
- F. Pipe and fittings, including linings and coatings, that will convey potable water or water that will be treated to become potable, shall be certified by an accredited organization in accordance with NSF 61 as being suitable for contact with potable water, and shall comply with requirements of authorities having jurisdiction at Site.

1.03 REFERENCED STANDARDS

- A. American Water Works Association (AWWA) latest edition:
 - 1. AWWA C901 - Polyethylene Pressure Pipe and Tubing, ½ Inch Through 3 Inch for Water Service

2. AWWA C906 - Polyethylene Pressure Pipe and Fittings, 4 Inch Through 65 Inch for Water Distribution and Transmission

B. American Society for Testing and Materials (ASTM) latest edition:

1. ASTM D638 – Tensile Method for Tensile Properties of Plastics
2. ASTM D790 – Test Materials for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
3. ASTM D2122 – Standard Method of Determining Dimensions of Thermoplastics Pipe and Fittings
4. ASTM D2239 – Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
5. ASTM D2657 – Practice for Heat-Joining of Polyolefin Pipe and Fittings
6. ASTM D2683 – Standard Specification for Socket Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
7. ASTM D2774 – Standard Practice for Underground Installation of Thermoplastic Pressure Piping
8. ASTM D2837 – Standard Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
9. ASTM D3035 – Polyethylene (PE) Plastic Pipe (DR-PE) Based on Controlled Outside Diameter
10. ASTM D3261 – Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
11. ASTM D3350 – Polyethylene Plastic Pipe and Fittings Material
12. ASTM F412 – Standard Terminology Relating to Plastic Piping Systems
13. ASTM F714 – Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
14. ASTM F905 – Standard Practice for Qualification of Polyethylene Saddle-Fused Joints
15. ASTM F1055 – Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
16. ASTM F1056 – Standard Specification for Socket Fusion Tools for Use in Socket Fusion Joining Polyethylene Pipe or Tubing and Fittings
17. ASTM F1290 – Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings
18. ASTM F2164 – Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
19. ASTM F2206 – Fabricated Fittings for Butt-Fused Polyethylene Plastic Pipe
20. ASTM F2620 – Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
21. ASTM F2786 – Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Gaseous Testing Media Under Pressure (Pneumatic Leak Testing)
22. ASTM F3124 – Standard Practice for Data Recording the Procedure used to Produce Heat Butt Fusion Joints

23. ASTM F3190 – Standard Practice for Heat Fusion Equipment (HFE) Operator Qualifications on Polyethylene (PE) and Polyamide (PA) Pipe and Fittings

C. Plastics Pipe Institute (PPI) latest edition:

1. The Plastics Pipe Institute Handbook of Polyethylene Pipe
2. PPI – TN-36 – General Guidelines for Connecting HDPE Potable Water Pressure Pipes to DI and PVC Piping Systems
3. PPI – TN-38 – Bolt Torque for Polyethylene Flanged Joints
4. PPI – TN-44 – Long Term Resistance of AWWA C906 Polyethylene (PE) Pipe to Potable Water Disinfectants
5. PPI – TN-45 – Mechanical Couplings for Joining Polyethylene Pipe
6. PPI – TN-46 – Guidance for Field Hydrostatic Testing of High Density Polyethylene Pressure Pipelines: Owner’s Considerations, Planning, Procedures, and Checklists
7. PPI – TN-49 – Recommendations for AWWA C901 Service Tubes in Potable Water Applications
8. PPI – TN-54 – General Guidelines for Squeezing Off Polyethylene Pipe in Water, Oil and Gas Applications

D. Plastics Pipe Institute Municipal Advisory Board (MAB)

1. MAB Generic Electrofusion Procedure for Field Joining of 12 Inch and Smaller Polyethylene Pipe
2. MAB Generic Electrofusion Procedure for Field Joining of 14 Inch to 30 Inch Polyethylene Pipe
3. MAB Model Specifications for PE 4710 Buried Potable Water Service, Distribution and Transmission Pipes and Fittings

1.04 SYSTEM DESIGN PARAMETERS

- A. The HDPE system working pressure rating accommodates the normal operating pressure and the repetitive surges. The pressure rating applies at 80° F or less. Piping installed that may experience operating temperatures up to 95° F shall be de-rated in accordance with manufacturer’s recommendation.
- B. Per AWWA 901 and C906, the repetitive surge pressure allowance is one half the pressure class of the pipe, and the occasional surge over pressure allowance is equal to the pressure class of the pipe. Allowable Total Pressure during Recurring Surge conditions equals 1.5 times the pipe’s pressure class. Allowable Total Pressure during Occasional Surge conditions equals 2.0 times the pipe’s pressure class.

Table 1 gives the Pressure Class per AWWA C906, Pressure Rating and Allowable Total Pressure during Recurring and Occasional Surge for PE4710 pipe at 80°F or less.

Table 1				
Pressure Class per AWWA C906 for PE 4710 at 80° F or Less				
Pipe Dimension Ratio (DR)	Pressure Class (psi)	Pressure Rating (psi)	Allowable Total Pressure During Recurring Surge (psi)	Allowable Total Pressure During Occasional Surge (psi)
DR 9	250	250	375	500
DR 11	200	200	300	400
DR 13.5	160	160	240	320
DR 17	125	125	187.5	250
DR 21	100	100	150	200
DR 26	80	80	120	160

1.05 SUBMITTALS

- A. Contractor shall submit information detailing the manufacturer's experience requirements to satisfy the requirements of this specification.
- B. Submit pipe catalog information confirming that pipe, fittings, joints, and other materials conform to the requirements of the specifications.
- C. Affirmation that product shipped meets or exceeds the standards set forth in this specification. This shall be in the form of a written document from the manufacturer attesting to the manufacturing process meeting the standards.
- D. Submit manufacturers recommended fusion procedures for the products.

PART 2 PRODUCTS

2.01 POLYETHYLENE PIPE, FITTINGS AND ACCESSORIES

- A. Polyethylene pipe and fittings 4 - 30 inch diameter shall be in accordance with AWWA C906, material designation code of PE4710 and all applicable ASTM standards.
- B. Polyethylene pipe ½ - 3 inch diameter for main line piping shall be polyethylene pipe (not tubing) in accordance with AWWA C901, material designation code of PE4710 and all applicable ASTM standards.
- C. Butt fusion fittings shall be made of HDPE material with a minimum material designation code of PE4710 and all applicable ASTM standards. Molded and fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified on the project documents. All fittings shall meet the requirements of AWWA C901, C906 and all applicable ASTM standards. Markings for molded

fittings shall comply with the requirements of ASTM D3261. Fabricated fittings shall be marked in accordance with ASTM F2206. Socket fittings shall meet ASTM D2683. Fabricated fittings shall be manufactured using a McElroy DataLogger to record fusion time, pressure and temperature, and shall be marked with a unique joint identifier that corresponds to the joint report. A graphic representation of the time and pressure data for all fusion joints made producing fittings shall be maintained for a minimum of five years as part of quality control and will be available upon request of owner.

- D. Electrofusion fittings shall be made of HDPE material with a minimum material designation code of PE4710 and meet ASTM F1055. Electrofusion fittings shall have a pressure rating equal to the pipe unless otherwise specified on the project documents. All electrofusion fittings shall be suitable for use as pressure conduits and have nominal burst values of four times the working pressure rating of the fitting. Marking of electrofusion fittings shall comply with the requirements of ASTM F1055. All electrofusion fittings shall be properly stored in compliance with the manufacturer's recommendation.
- E. If saddle fusion is used to fuse branch saddles, tapping tees and other HDPE fittings onto the wall of the main pipe, it shall be done in accordance with ASTM F2620 or PPI TR-41 or the fitting manufacturer's recommendations. Saddle fusion joints shall be made by qualified fusion technicians. Qualification of the fusion technician shall be demonstrated by evidence of fusion training within the past two years on the equipment to be utilized on this project in accordance with ASTM F3190.
- F. If socket fusion is used to fuse branch saddles, tapping tees and other HDPE fittings onto the wall of the main pipe, it shall be done in accordance with ASTM D2683 or the fitting manufacturer's recommendations. Socket fusion joints shall be made by qualified fusion technicians. Qualification of the fusion technician shall be demonstrated by evidence of fusion training within the past two years on the equipment to be utilized on this project in accordance with ASTM F3190. All equipment used for socket fusion should comply with ASTM F1056 and manufacturer's recommendations.
- G. Flanges and Mechanical Joint Adapters (MJ) shall have a minimum material designation code of PE4710 and meet all applicable AWWA and ASTM standards. Flanged and MJ adapters can be made to ASTM D3261 or machined in compliance with ASTM F2206. Flanges and MJ adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. Markings for molded or machined flange adapters or MJ adapters shall be per ASTM D3261. Fabricated (including machined) flange adapters shall be marked per ASTM F2206. Installation of all Flanged adapters shall follow the guidelines of the Plastics Pipe Institute TN-38.
- H. Glands, bolts, and gaskets shall be manufactured in accordance with AWWA C153. Bolts and nuts shall be grade 2 or higher.

2.02 PIPELINE IDENTIFICATION

- A. All polyethylene pipe shall be marked in accordance with the standards to which it is manufactured.
- B. All polyethylene pipe shall be black, and shall contain a continuous colored stripe, 2 inches wide, located at no greater than 90 degree intervals around the pipe. Stripes shall be impregnated or molded into the pipe by the manufacturer. Application of the stripes after manufacture is not acceptable. Stripe color shall be:
 - 1. Potable Water Mains - blue stripes
 - 2. Reclaimed Water Mains - purple stripes
 - 3. Force Mains - brown stripes
 - 4. Sanitary Sewer - green stripes
 - 5. Storm Sewer - no stripes required

PART 3 EQUIPMENT

3.01 DATA LOGGER

- A. A data logger shall be used to record and document all butt fusion process. The data logger must be compatible and outfitted with an electronic data recording device. A digital report or printout for all fusion joints made that complies with, but is not limited to, ASTM F3124 must be delivered to the Owner upon request and at the completion of the project. All hydraulic fusion must be recorded and able to produce a graphic representation of the time and pressure data. All manual fusion must be recorded with, but not limited to, Joint ID, Operator Name and ID, Pipe information, and Heater Plate Temperature. The recording unit shall be a DataLogger 6 as manufactured by McElroy Manufacturing, Inc, or newer model or approved equivalent.

PART 4 EXECUTION

4.01 PIPE JOINING

- A. High density polyethylene pipe shall be heat fused and pressure tested as per manufacturer's guidelines before installation. During assembly and prior to installation, pipe must be laid out in such a way as to minimize interference to pedestrian and vehicular traffic.
- B. Cuts or gouges that reduce the wall thickness by more than 10% are not acceptable and must be cut out, discarded and the pipe rejoined.
- C. Each butt fusion shall be recorded and logged by a datalogger affixed to the fusion machine. Joint data shall be submitted as part of the as-built documentation.

- D. Mechanical joining – Polyethylene pipe and fittings may be joined together or to other materials by means of flanged connections or mechanical couplings designed for joining polyethylene pipe or for joining polyethylene pipe to another pipe material. Mechanical couplings shall be fully pressure rated and fully thrust restrained and installed in accordance with manufacturer's recommendations.

4.02 TESTING

A. Pressure and Leakage tests

1. Conduct hydrostatic pressure testing of installed polyethylene pipe in accordance with ASTM F2164.
2. For HDPE mains, fill the main slowly ensuring fill rate does not exceed capacity of air release devices. Once air has been expelled from the system, gradually raise the pressure to 160 psi. Add makeup water as necessary to maintain this pressure as necessary for four hours. After the four hour period, reduce main pressure to the 150 psi test pressure and monitor for one hour. Do not increase pressure or add makeup water during this one hour period. The test is passed and considered acceptable if the main pressure does not drop more than 5% (7.5 psi) during the one hour period.
3. If any defects or leaks are revealed, they should be corrected and the pipeline retested after a minimum 24 hour recuperation period between tests. Total testing conducted on a section of pipeline shall not exceed eight hours within a 24 hour period.

END OF SECTION

SECTION 02615

DUCTILE IRON PIPE AND FITTINGS

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required and install ductile iron pipe and ductile iron fittings for buried and exposed pressure piping complete as shown on the drawings and as specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02221: Earth Excavation and Backfill in Trenches
- B. Section 02701: Water Mains

1.03 SUBMITTALS

- A. The Contractor shall submit to the Engineer, within ten days after signing of the contract, a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. The Contractor shall submit for approval, as provided in the General Conditions, complete, detailed working drawings of all ductile iron pipe and fittings.
- C. The Contractor shall submit and shall comply with the recommendations of the pipe manufacturer for handling, storing, and installing pipe and fittings.
- D. The Contractor shall submit the pipe manufacturer's certification of compliance with the specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Ductile iron pipe shall conform to ANSI A21.51 and AWWA C151. Thickness of pipe shall be Class 51 for 8" diameter and smaller, class 52 for 10" diameter and larger.
- B. Restrained joints shall be provided for buried locations. Restrained joint pipe and fittings for 12" and smaller diameter pipe shall be "Mechanical Joint with Retainer Gland" as manufactured by American Cast Iron Pipe Company, "Lok-Tyton" or "TR FLEX" as manufactured by U.S. Pipe Company, "Super-Lock" as manufactured by Clow Corporation, or equal. Restrained joint pipe and fittings for 14" and larger

diameter pipe shall be "Lok-Fast" as manufactured by American Cast Iron Pipe Company, "Lok-Tyte" as manufactured by U.S. Pipe Company, "Super-Lock" as manufactured by Clow Corporation, or equal. Where bolts are required, they shall be stainless steel.

- C. Fittings shall meet the requirements of ANSI/AWWA C110. Rubber gaskets shall conform to ANSI A21.11 for mechanical joints.

2.02 PROTECTIVE COATINGS

- A. Pipe shall have a cement mortar lining on the interior in accordance with the latest revision of ANSI/AWWA C104/A21.4 or as indicated on the drawings.

- B. Exterior Coating of Pipe

1. Exterior Coating of Exposed Piping: The exterior surfaces of pipe which will be exposed to the weather or above ground and not subject to immersion or corrosive gases shall be thoroughly cleaned and then given a coating of:
 - a. Two (2) coats of Epoxy Polyamide and a final coat of Cycloaliphatic Amine Epoxy conforming to the requirements of Section 09800 - Protective Coating.
 - b. All surface preparation and materials shall be applied in accordance with manufacturer's instructions.
2. Exterior Coating of Exposed Piping subject to Immersion or Corrosive Gases: The exterior surfaces of pipe which will be exposed inside structures. Immersed or subject to corrosive gases shall be thoroughly cleaned and then coated with:
 - a. Prime coat of Polyamidoamine Epoxy Primer and two (2) top coats of Cycloaliphatic Amine Epoxy conforming to the requirements of Section 09800 - Protective Coating.
 - b. All surface preparation and materials shall be applied in accordance with manufacturer's instructions.
3. Exterior Coating of Buried Piping: The exterior coating shall be an asphaltic coating approximately 1-mil thick.
4. Buried Piping Polyethylene Sleeve: Sleeves shall conform to the requirements of AWWA C105, and shall be a tubular 8-mil thick linear low-density film. Color shall be black.

2.03 PIPE REJECTION

Should any Ductile or metal pipe arrive on site with a non-approved coating for its intended environment, the coating shall be completely removed and coated as per section 09800 and

section 15062 or the pipe material shall be replaced at the expense of the contractor. NO EXCEPTIONS.

2.04 IDENTIFICATION

Each length of pipe and each fitting shall be marked with the name of manufacturer, size and class. All gaskets shall be marked with the name of manufacturer, size, and proper insertion direction.

2.05 MANHOLE AND WET WELL CONNECTIONS

Pipe stubs for all manhole and wet well connections shall not exceed two feet (2') in length. Caps shall be furnished where required.

PART 3 - EXECUTION

3.01 LAYING DUCTILE IRON PIPE AND FITTINGS

- A. All buried piping shall be installed in accordance with recommendations of the pipe manufacturer and as specified herein.
- B. Care shall be taken in handling, storage, and installation of pipe and fittings to prevent injury to the pipe or coatings. All pipe and fittings shall be examined before laying, and no piece shall be installed which is found to be defective. All damage to the pipe coatings shall be repaired according to the manufacturer's recommendations.
- C. All pipe and fittings shall be kept clean and shall be thoroughly cleaned before lying.
- D. Pipe shall be laid to lines and grades shown on the drawings with bedding and backfill as shown on the drawings and as specified in Section 02221. Blocking under the pipe will not be permitted.
- E. When laying is not in progress, including lunch time, the open ends of the pipe shall be closed by watertight plug or other approved means.
- F. Under no circumstances shall the pipe or accessories be dropped into the trench.

3.02 TESTING

- A. All force mains shall be field tested. The Contractor shall supply all labor, equipment, material, gages, pumps, and incidentals required for testing.
- B. The test pressure shall be 125 psig for water mains unless noted otherwise. The test pressure shall be 75 psig for sewer force mains unless noted otherwise. The test pressure shall be measured at the highest point along the test section.

- C. Testing shall be conducted after backfilling has been completed and before placement of permanent surface.
- D. Testing procedure shall be as follows:
1. Fill line slowly with water. Maintain flow velocity less than two feet (2') per second.
 2. Expel air completely from the line during filling and again before applying test pressure. Air shall be expelled by means of taps at points of highest elevation.
 3. Apply test pressure. Measure the quantity of water that must be pumped into the line to maintain pressure within 5 psi of the test pressure for a period of two (2) hours. This quantity is defined as leakage.
 4. Carefully examine any exposed pipe, fittings, and joints during the test.
- E. Allowable leakage: No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{S D P^{1/2}}{133200}$$

- L = Loss Gal/hr.
 S = Length of pipe tested, in feet
 D = Nominal diameter in inches
 P = Average test pressure

Notes: The following shall be determined at the discretion of the Engineer.

1. Minimum Test pressure of 50 psig unless otherwise noted.
 2. Test duration shall be a minimum of two hours.
 3. All visible leaks are to be repaired regardless of the amount of leakage.
- F. If any test of pipe laid discloses leakage greater than that allowed, the Contractor shall, at his own expense, locate and repair the cause of leakage and retest the line.
- G. All visible leaks are to be repaired regardless of the amount of leakage.

3.03 CLEANING

At the conclusion of the work, the Contractor shall thoroughly clean all of the new pipelines by flushing with water or other means to remove all dirt, stones, pieces of wood, or other material which may have entered during the construction period. Debris cleaned from the lines shall be removed from the job site. If, after this cleaning, any obstructions remain, they shall be removed.

3.04 DISINFECTION AND SAMPLING

- A. Pipes used in the distribution of potable water shall be cleaned and disinfected in accordance with AWWA C601 and all applicable regulatory guidelines.
- B. Prior to the water main(s) being placed in service, a “clear water” sample shall be collected from the new segment(s) of water main and submitted to a LDH accredited laboratory for microbiological testing. The “clear water” sample(s) shall be collect once all pressure testing and disinfection has been completed. If the water main segment(s) failed the microbiological testing, the water main shall be flushed and disinfected. Subsequent “clear water” samples shall be collected and submitted for analysis.

END OF SECTION

SECTION 02622

POLYVINYL CHLORIDE PIPE

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall furnish and install the polyvinyl chloride (PVC) pipe along with labor, materials and equipment necessary for installation in accordance with the Plans and Specifications.

1.02 REFERENCES

- A. ASTM D1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
- B. ASTM D1785 Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- C. ASTM F441 Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- D. ASTM F477 Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- E. ASTM F1674 Standard Test Method for Joint Restraint Products for Use with PVC Pipe
- F. AWWA C-900 (PVC) Pressure Pipe and Fabricated Fittings
- G. AWWAC-905 Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 30" and larger for Water Transmission and Distribution

1.03 SUBMITTALS

Certified mill tests shall be furnished the Engineer by the manufacturer for all pipe and fittings at least 10 days prior to shipment of material to the job site.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Pipe:

1. All polyvinyl chloride (PVC) pipe shall be extruded from PVC meeting the requirements of cell classification 12454-B as defined in ASTM D1784.
2. All polyvinyl chloride (PVC) pressure pipe used in potable water distribution 4 inches through 30 inches in diameter shall meet AWWA specification C-900, DR18. PVC pipe larger than 30 inches in diameter shall meet AWWA specification C-905, DR25.
3. All polyvinyl chloride (PVC) pipe used to transport raw sewage, treated sewage, sludge, etc., by gravity shall be SDR 26 PVC pipe. Polyvinyl chloride (PVC) pipe in diameters of 16 inches through 36 inches shall meet all requirements of ASTM F1674 latest revision or approved equal.
4. All polyvinyl chloride (PVC) pipe used to transport raw sewage, treated sewage, sludge, etc., under pressure shall be SDR 26 for diameters up to and including 36 inches. The pipe shall have a minimum pressure rating of 160 psi, and compatible for use with ductile iron joints and fittings.

B. Fitting and Specials:

1. The polyvinyl chloride fitting used in conjunction with Schedule 80 and SDR 26 polyvinyl chloride (PVC) pipe shall be in accordance with all applicable sections of ASTM Specifications.
2. PVC fittings in chlorine solution service shall be Schedule 80, suitable for outdoor installation.
3. The strength class of the fitting shall be not less than the strength of any adjoining pipe.
4. No polyvinyl chloride (PVC) pipe fitting will be allowed on PVC pipe used to transport raw sewage, treated sewage, sludge, etc., under pressure. All bends shall be ductile iron fittings meeting the requirements of Section 02615.

C. Joints:

1. The pipe will have integral bell elastomeric, gasketed joints in accordance with ASTM F477. The gaskets shall be inserted into the pipe bell at the factory prior to shipment.
2. All "O" rings furnished as part of any fitting, union, etc., conveying chloride solution shall be suitable for chlorine solution service.

D. Protective Coatings: No protective coating will be required on polyvinyl chloride (PVC) pipe.

E. Restrained Joints:

1. Polyvinyl chloride (PVC) pipe shall be restrained using the Series 1100 PV or 1100 HV MEGALUG mechanical joint thrust restraint as manufactured by EBAA Iron, Inc. or approved equal.
2. The EBAA Iron Series 1100 PV or 1100 HV MEGALUG assembly shall be cast completely of closely controlled ductile iron conforming to ASTM A536, latest

revision, and furnished with silicone bronze IFI 140 Grade 655 bolts. All glands and bolts shall be coated with two (2) coats of coal tar epoxy, Koppers 300-M Bitumastic or approved equal, with a minimum dry film thickness of eight (8) mils per coat.

3. Both types of restraining glands shall be wrapped with an eight (8) mil thick polyethylene tube for additional protection. The polyethylene wrap shall extend a minimum of two (2') feet in either direction from the gland and secured on the end with circumferential turns of tape.
4. All restrained joints shall be inspected at the job site after installation. Field touch-up and repair if needed shall be made by the Contractor under the supervision and inspection of a representative of the coating supplier.

PART 3 - EXECUTION

3.01 LAYING PIPE AND FITTINGS

- A. All buried piping shall be installed in accordance with recommendations of the pipe manufacturer and as specified herein.
- B. Care shall be taken in handling, storage, and installation of pipe and fittings to prevent injury to the pipe or coatings. All pipe and fittings shall be examined before laying, and no piece shall be installed which is found to be defective. All damage to the pipe coatings shall be repaired according to the manufacturer's recommendations.
- C. All pipe and fittings shall be kept clean and shall be thoroughly cleaned before lying.
- D. Pipe shall be laid to lines and grades shown on the drawings with bedding and backfill as shown on the drawings and as specified in Section 02221. Blocking under the pipe will not be permitted.
- E. When laying is not in progress, including lunch time, the open ends of the pipe shall be closed by watertight plug or other approved means.
- F. Under no circumstances shall the pipe or accessories be dropped into the trench.

3.02 TESTING AND INSPECTION

- A. All pipe and fittings shall be subjected to a rigid inspection after delivery to the site and before being placed in the work. Any piece found defective by such field inspection will be rejected and shall be immediately removed from the premises.
- B. The test pressure shall be 125 psig for water mains unless noted otherwise. The test pressure shall be 75 psig for sewer force mains unless noted otherwise. The test pressure shall be measured at the highest point along the test section.

- C. Testing shall be conducted after backfilling has been completed and before placement of permanent surface.
- D. Testing procedure shall be as follows:
1. Fill line slowly with water. Maintain flow velocity less than two feet (2') per second.
 2. Expel air completely from the line during filling and again before applying test pressure. Air shall be expelled by means of taps at points of highest elevation.
 3. Apply test pressure. Measure the quantity of water that must be pumped into the line to maintain pressure within 5 psi of the test pressure for a period of two (2) hours. This quantity is defined as leakage.
 4. Carefully examine any exposed pipe, fittings, and joints during the test.
- E. Allowable leakage: No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{S D P^{1/2}}{133200}$$

- L = Loss Gal/hr.
 S = Length of pipe tested, in feet
 D = Nominal diameter in inches
 P = Average test pressure

Notes: The following shall be determined at the discretion of the Engineer.

1. Minimum Test pressure of 75 psig for sewer force mains and 125 psig for water mains unless otherwise noted.
 2. Test duration shall be a minimum of two hours.
 3. All visible leaks are to be repaired regardless of the amount of leakage.
- F. If any test of pipe laid discloses leakage greater than that allowed, the Contractor shall, at his own expense, locate and repair the cause of leakage and retest the line.
- G. All visible leaks are to be repaired regardless of the amount of leakage.
- H. The alignment of gravity sewer mains shall be field verified by deflection (mandrel) test and lamping the lines. The contractor at his own expense shall re-lay all gravity sewer lines determined to be out of alignment by deflection testing. Damaged pipe shall not be repaired or re-used. All re-laid gravity mains shall be re-inspected and re-checked for alignment.
- I. Water tightness of the gravity sewer system, including the gravity sewer mains, shall be field verified by exfiltration testing. The volume of water lost during exfiltration testing

shall not exceed 200 gallons per day – per inch of pipe diameter – per mile of pipe.

3.03 CLEANING

At the conclusion of the work, the Contractor shall thoroughly clean all of the new pipelines by flushing with water or other means to remove all dirt, stones, pieces of wood, or other material which may have entered during the construction period. Debris cleaned from the lines shall be removed from the job site. If, after this cleaning, any obstructions remain, they shall be removed.

3.04 DISINFECTION AND SAMPLING

- A. Pipes used in the distribution of potable water shall be cleaned and disinfected in accordance with AWWA C601 and all applicable regulatory guidelines.
- B. Prior to the water main(s) being placed in service, a “clear water” sample shall be collected from the new segment(s) of water main and submitted to a LDH accredited laboratory for microbiological testing. The “clear water” sample(s) shall be collect once all pressure testing and disinfection has been completed. If the water main segment(s) failed the microbiological testing, the water main shall be flushed and disinfected. A subsequent “clear water” sample shall be collected and submitted for analysis.

END OF SECTION

SECTION 02658

CONNECTION TO AND WORK ON THE EXISTING SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall coordinate with Tammany Utilities and The Department Environmental Services prior to connecting to existing sewer and/or water systems. The Contractor shall contact Tammany Utilities at (985) 893-1717 to schedule connection inspection.
- B. The Contractor shall supply all materials, equipment and labor required to maintain pressure and flow in existing sewer and/or water system, and maintain all temporary connections and bypasses and construct the permanent connections to the new system as shown on the Drawings and as directed by the Engineer.
- C. The Contractor shall supply all materials, equipment and labor required for installing all piping, valves, and pipelines and all incidental work required.
- D. Should damage of any kind occur to the existing sewer system, the Contractor shall at his/her own expense, as part of the work under this Item, make repairs to the satisfaction of the Engineer.
- E. The Contractor shall notify the Engineer immediately of any discrepancies in elevations of existing valves, and pipelines between those shown on the Drawings and those established during construction in order that the Engineer can make the necessary modifications.

1.02 RELATED WORK

- A. Section 02220 - Excavation, Backfill, Fill and Grading For Structures
- B. Section 02221 - Earth Excavation and Backfill In Trenches

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02701

WATER MAINS

PART 1 - GENERAL

1.01 RELATED ITEMS SPECIFIED ELSEWHERE

- A. Excavation and Backfill for Trenches, Pavement and Structures in Section 02221
- B. Ductile and Cast-Iron Pipe and Fittings in Section 02615
- C. Polyvinyl Chloride (PVC) Pipe in Section 02622
- D. High density Polyethylene Pipe in Section 02515

1.02 DESCRIPTION

Under this section of the specifications, the Contractor shall furnish all labor, materials, tools and equipment necessary to install the water main and restrained water main indicated on the Drawings. Other items also contained in this section of the specifications include joint restrainers, casing pipe and PVC and HDPE pipe. All work is to be done in accordance with the project Drawings and Specifications and in accordance with manufacturers' recommendations.

1.03 PRODUCT DELIVERY, HANDLING AND STORAGE

The equipment specified herein shall be packaged and shipped in a manner that shall adequately protect the equipment from damage. Upon receipt of the equipment by the Contractor, the equipment shall be stored in a location within the Contractor's staging area remote from possible damage. If any equipment is damaged, lost or stolen at any time prior to acceptance of the project, it shall be replaced at the Contractor's expense.

1.04 AS-BUILT SURVEY

Also, as part of the Work under this section of the Specifications, the Contractor shall conduct an "as-built" survey showing the exact location of the installed water main with ties to the project baseline and additional ties to existing structures (i.e., piers, back of curbs, buildings, streets, etc.). All fittings shall be located at the station installed and the offset from the baseline.

PART 2 - PRODUCTS

2.01 DUCTILE IRON PIPE AND FITTINGS

Ductile iron pipe and fittings shall be as specified in other sections of these Specifications.

2.02 POLYVINYL CHLORIDE (PVC) PIPE

PVC pipe shall be as specified in other sections of these Specifications.

2.03 HIGH DENSITY POLYETHYLENE (HDPE) PIPE

HDPE pipe shall be as specified in other sections of these Specifications.

2.04 JOINT RESTRAINERS

Joint restrainers for ductile iron fittings shall be as specified in other sections of these specifications.

PART 3 - EXECUTION

3.01 GENERAL

A. Excavation and Backfill

Excavation, backfill and compaction required for the installation of the water main shall comply with the requirements of other sections of these Specifications.

B. Advance Trench Excavation

The Contractor shall excavate water main trench adequately in advance of any pipe installation as to uncover potential conflicts with the water main. Should conflicts arise the Contractor shall deflect the water main above or below the conflicting utility or house connection.

Where the length of water main being installed is less than 50', the Contractor shall excavate the entire length of the trench. In the event of a conflict, the Contractor shall deflect the water main above or below the conflicting utility or house connection or install a vertical offset in the water main.

The Contractor, prior to the end of each working day, shall backfill the open trench to grade. In addition, the contractor is to block the end of the open pipe to prevent from access to the interior of the pipe of varmints, animals, etc.

C. Restrained Joints

The water mains shall be restrained as shown on the plans. The encased water main installations shall be fully restrained. Restraining shall be accomplished by use of ductile iron restrainer glands as required in Section 02615 "Ductile Iron Pipe and Fittings". Thrust block restraints shall not be allowed unless indicated on the Plans.

D. Pipe Installation and Testing

All laying and jointing and all testing for defects and for leakage shall be performed in the presence of the Engineer, and shall be subject to its approval before acceptance. All materials found during the progress to have defects will be rejected and the Contractor shall promptly remove such defective material from the site of the work.

3.02 PIPE INSTALLATION (WATER MAIN)

- A. The installation of water main pipe shall be strictly in accordance with the manufacturer's technical data and instructions. Proper implements, tools and facilities shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings and appurtenances shall be carefully lowered into the trench piece by piece by means of a derrick, ropes or other suitable tools or equipment in such a manner as to prevent damage to materials and protective coatings and linings. Under no circumstances shall materials be dropped or dumped into the trenches.
- B. All pipe, fittings, and appurtenance shall be inspected for defects and cracks prior to being lowered into the trench.
- C. The outside of the spigot, the inside of the bell, and any couplings used shall be brushed and wiped clean and dry and free from all foreign matter before the pipe is joined.
- D. Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. If the pipe laying crew cannot put the pipe into the trench and in place without getting earth into it, a heavy, tightly woven canvas bag of suitable size shall be placed over each end and left there until the connection is to be made to the adjacent pipe. During the laying operations, no debris, tools, clothing or other material shall be placed in the pipe.
- E. After placing a length of pipe in the trench, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. Bedding and backfill material and compaction requirements shall comply with the section "Excavating, Backfilling and Compacting for Utilities and Pavement" of these specifications. Precautions shall be taken to prevent dirt from entering the joint space.
- F. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means approved by the Engineer. This provision shall apply

during the noon hour as well as overnight. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry.

- G. Cutting of pipes for inserting fittings or closure pieces shall be done in a neat and workmanlike manner in accordance with instructions of the pipe manufacturer and without damage to the pipe.
- H. The Contractor shall install restrained ductile iron fittings (mechanical joint with retainer glands) at locations where piping alignment adjustments (vertical and horizontal) are required as shown or indicated on the drawings and specifications. Restrained ductile iron fittings shall conform to the section pertaining to "Ductile Iron Pipe and Fittings" of these specifications.
- I. The water main shall be pressure tested in accordance with Section 02615 3.03 pertaining to "Testing" of these specifications.
- J. Pipes used in the distribution of potable water shall be cleaned and disinfected in accordance with AWWA C651 and all applicable regulatory guidelines. Prior to the water main(s) being placed in service, a "clear water" sample shall be collected from the new segment(s) of water main and submitted to a LDH accredited laboratory for microbiological testing. The "clear water" sample(s) shall be collected once all pressure testing and disinfection has been completed. If the water main segment(s) failed the microbiological testing, the water main shall be flushed and disinfected. A subsequent "clear water" sample shall be collected and submitted for analysis.

3.03 AS-BUILT SURVEY

During the progress of Work, the Contractor shall conduct an "as-built" survey pinpointing the exact location of the installed water main. The survey shall include ties to the established project baseline and ties to existing structures at no direct pay.

3.04 WATER UTILITY – TRACER WIRE

Tracer wire shall be installed in accordance with the details and specifications in this section.

Materials

General

All trace wire and trace wire products shall be domestically manufactured in the U.S.A.

All trace wire shall have HDPE insulation intended for direct bury, color coated per APWA standard for the specific utility being marked.

Trace wire

- **Open Trench** - Trace wire shall be #12 AWG Copper Clad Steel, High Strength with minimum 450 lb. break load, with minimum 30 mil HDPE insulation thickness.
- **Directional Drilling/Boring** - Trace wire shall be #12 AWG Copper Clad Steel, Extra High Strength with minimum 1,150 lb. break load, with minimum 30 mil HDPE insulation thickness.
- **Trace wire – Pipe Bursting/Slip Lining** - Trace wire shall be 7 x 7 Stranded Copper Clad Steel, Extreme Strength with 4,700 lb. break load, with minimum 50 ml HDPE insulation thickness.

Connectors

- All mainline trace wires must be interconnected in intersections, at mainline tees and mainline crosses. At tees, the three wires shall be joined using a single 3-way lockable connector. At Crosses, the four wires shall be joined using a 4-way connector. Use of two 3-way connectors with a short jumper wire between them is an acceptable alternative.
- **Direct bury wire connectors** – shall include 3-way lockable connectors and mainline to lateral lug connectors specifically manufactured for use in underground trace wire installation. Connectors shall be dielectric silicon filled to seal out moisture and corrosion, and shall be installed in a manner so as to prevent any uninsulated wire exposure.
- Non locking friction fit, twist on or taped connectors are prohibited.

Termination/Access

- All trace wire termination points must utilize an approved trace wire access box (above ground access box or grade level/in-ground access box as applicable), specifically manufactured for this purpose.
- All grade level/in-ground access boxes shall be appropriately identified with “sewer” or “water” cast into the cap and be color coded.
- A minimum of 2 ft. of excess/slack wire is required in all trace wire access boxes after meeting final elevation.
- All trace wire access boxes must include a manually interruptible conductive/connective link between the terminal(s) for the trace wire connection and the terminal for the grounding anode wire connection.
- Grounding anode wire shall be connected to the identified (or bottom) terminal on all access boxes.
- **Service Laterals on public property** - Trace wire must terminate at an approved grade level/in- ground trace wire access box, located at the edge of the road right-of-way, and out of the roadway.
- **Service Laterals on private property** - Trace wire must terminate at an approved above-ground trace wire access box, affixed to the building exterior directly above where the utility enters the building, at an elevation not greater than 5 vertical feet above finished grade, or terminate at an approved grade level/in-ground trace wire access box, located within 2 linear feet of the building being served by the utility.

- **Hydrants** – Trace wire must terminate at an approved above-ground trace wire access box, properly affixed to the hydrant grade flange. (affixing with tape or plastic ties shall not be acceptable)
- **Long-runs, in excess of 500 linear feet without service laterals or hydrants** - Trace wire access must be provided utilizing an approved grade level/in-ground trace wire access box, located at the edge of the road right-of-way, and out of the roadway. The grade level/in-ground trace wire access box shall be delineated using a minimum 48” polyethylene marker post, color coded per APWA standard for the specific utility being marked.

Grounding

- Trace wire must be properly grounded at all dead ends/stubs
- Grounding of trace wire shall be achieved by use of a drive-in magnesium grounding anode rod with a minimum of 20ft of #12 red HDPE insulated copper clad steel wire connected to anode (minimum 1.5 lb.) specifically manufactured for this purpose, and buried at the same elevation as the utility.
 - When grounding the trace wire at dead ends/stubs, the grounding anode shall be installed in a direction 180 degrees opposite of the trace wire, at the maximum possible distance.
 - When grounding the trace wire in areas where the trace wire is continuous and neither the mainline trace wire or the grounding anode wire will be terminated at/above grade, install grounding anode directly beneath and in-line with the trace wire. Do not coil excess wire from grounding anode. In this installation method, the grounding anode wire shall be trimmed to an appropriate length before connecting to trace wire with a mainline to lateral lug connector.
 - Where the anode wire will be connected to a trace wire access box, a minimum of 2 ft. of excess/slack wire is required after meeting final elevation.

Installation

General

- Trace wire installation shall be performed in such a manner that allows proper access for connection of line tracing equipment, proper locating of wire without loss or deterioration of low frequency (512Hz) signal for distances in excess of 1,000 linear feet, and without distortion of signal caused by multiple wires being installed in close proximity to one another.
- Trace wire systems must be installed as a single continuous wire, except where using approved connectors. No looping or coiling of wire is allowed.
- Any damage occurring during installation of the trace wire must be immediately repaired by removing the damaged wire, and installing a new section of wire with approved connectors. Taping and/or spray coating shall not be allowed.
- Trace wire shall be installed at the bottom half of the pipe and secured (taped/tied) at 5’ intervals.
- Trace wire must be properly grounded as specified.
- Trace wire on all service laterals/stubs must terminate at an approved trace wire access box located directly above the utility, at the edge of the road right-of-way, but out of the roadway. (See Trace wire Termination/Access)

- At all mainline dead-ends, trace wire shall go to ground using an approved connection to a drive-in magnesium grounding anode rod, buried at the same depth as the trace wire. (See Grounding)
- Mainline trace wire shall not be connected to existing conductive pipes. Treat as a mainline dead- end, ground using an approved waterproof connection to a grounding anode buried at the same depth as the trace wire.
- All service lateral trace wires shall be a single wire, connected to the mainline trace wire using a mainline to lateral lug connector, installed without cutting/splicing the mainline trace wire.
- In occurrences where an existing trace wire is encountered on an existing utility that is being extended or tied into, the new trace wire and existing trace wire shall be connected using approved splice connectors, and shall be properly grounded at the splice location as specified.

Water System

- A mainline trace wire must be installed, with all service lateral trace wires properly connected to the mainline trace wire, to ensure full tracing/locating capabilities from a single connection point.
- Lay mainline trace wire continuously, by-passing around the outside of valves and fittings on the North or East side.
- Trace wire on all water service laterals must terminate at an approved trace wire access box color coded blue and located directly above the service lateral at the edge of road right of way.
- Above-ground tracer wire access boxes will be installed on all fire hydrants.
- All conductive and non-conductive service lines shall include tracer wire.

Prohibited Products and Methods

The following products and methods shall not be allowed or acceptable

- Uninsulated trace wire
- Trace wire insulations other than HDPE
- Trace wires not domestically manufactured
- Non locking, friction fit, twist on or taped connectors
- Brass or copper ground rods
- Wire connections utilizing taping or spray-on waterproofing
- Looped wire or continuous wire installations, that has multiple wires laid side-by-side or in close proximity to one another
- Trace wire wrapped around the corresponding utility
- Brass fittings with trace wire connection lugs
- Wire terminations within the roadway, i.e. in valve boxes, cleanouts, manholes, etc. • Connecting trace wire to existing conductive utilities

Testing

All new trace wire installations shall be located using typical low frequency (512Hz) line tracing equipment, witnessed by the contractor, engineer and facility owner as applicable, prior to acceptance of ownership.

This verification shall be performed upon completion of rough grading and again prior to final acceptance of the project.

Continuity testing in lieu of actual line tracing shall not be accepted.

Products

The following products shall be used.

- Copper clad Steel (CCS) trace wire o Open Trench – Copperhead #12 High Strength part # 1230*-HS**
- o Directional Drilling/Boring - Copperhead Extra High Strength part # 1245*-EHS** o Pipe Bursting/Slip Lining – Copperhead SoloShot Extreme Strength 7 x 7 Stranded part # PBX-50*-**
 - * Denotes color: B=Blue, G=Green, P=Purple
 - **Denotes spool size. 500’ 1000’ 2500’
 - Connectors o Copperhead 3-way locking connector part # LSC1230* o DryConn 3- way Direct Bury Lug: Copperhead Part # 3WB-01
 - Termination/Access o Non-Roadway access boxes applications: Trace wire access boxes Grade level Copperhead adjustable lite duty Part # LD14*TP
- o Concrete / Driveway access box applications: Trace wire access boxes Grade level Copperhead Part # CD14*TP 14” o Fire hydrant trace wire access box applications: Above ground two terminal Cobra Test Station, denoting “F” includes hydrant mounting flange. Copperhead part # T2*-FLPKG-5/8 to fit hydrants with 5/8” bolts and T2*-FLPKG-3/4 to fit hydrants with 3/4” bolts.
- Grounding o Drive in Magnesium Anode: Copperhead Part # ANO-12 (1.5 lb)

Manufacture product options:

The information provided by Copperhead Industries gives you product options to help you choose the correct wire – termination/access points – connectors and grounding products. Other manufactures provide these products; this information is only a guide.

END OF SECTION

SECTION 02900

LANDSCAPING

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, and equipment to satisfactorily return all construction areas to their original conditions or better.
- B. Work includes furnishing and placing fertilizer, planting, watering, and maintenance of lawns.
- C. Seeding of disturbed areas shall be allowed along undeveloped areas of the pipeline installation. Sodding will be required for any established lawns in developed areas. The type of restoration required for any individual area shall be mutually agreed upon by Contractor and Engineer prior to construction.

1.02 RELATED WORK NOT INCLUDED

- A. Excavation, filling, and grading required to establish elevation shown on the drawings are included under other sections of these specifications.
- B. Section 01380: Construction Photographs and videos.

1.03 QUALITY ASSURANCE

- A. Requirements - It is the intent of this specification that the Contractor is obliged to deliver a satisfactory stand of perennial grass as specified. If necessary, the Contractor shall repeat any or all of the work, including plowing, fertilizing, watering, seeding or sodding at no additional cost to the Owner until a satisfactory stand is obtained.
- B. Satisfactory Stand - For purposes of grassing, a satisfactory stand of grass is herein defined as a full lawn cover over areas to be seeded or sodded, with grass free of weeds, alive and growing, leaving no bare spots larger than 3/4 square yard within a radius of 10 feet.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Fertilizer, slow-release type meeting the following minimum requirements: 12% nitrogen, 3% phosphorus, 6% potassium, 40% other available materials derived from organic sources. Fertilizer shall be uniform in composition, dry and free flowing

- delivered to sites in original unopened containers bearing manufacturer's statement or guarantee.
- B. Grass sod shall be of the same type grass as existed prior to construction. Sod shall be live nursery quality sod blocks measuring at least 9 inches square. The sod shall be of a thickness that will provide a soil binder with a root system that will enhance growth of the grass and provide a thick, healthy grass cover.
 - C. Grass seed shall be the same as existed prior to construction or as approved by the Engineer and shall be 99% minimum purity, 80% minimum germination, and 1% maximum weed seed, labeled in accordance with U.S. Department of Agriculture Rules and Regulations under Federal Seed Act in effect. Seed which has become wet, moldy, or otherwise damaged in transit or storage shall not be acceptable.
 - D. Topsoil stockpiled during excavation shall be used. If additional topsoil is required, it shall be obtained off site. Topsoil shall be fertile, natural surface soil, capable of producing all trees, plants, and grassing specified herein.
 - E. Mulch shall be fresh pine mulch. Rate of application specified herein shall correspond to depth not less than 1" or more than 3" according to texture and moisture content of mulch material.
 - F. Water: It is the Contractor's responsibility to supply all water to the site, as required during planting operations and through the maintenance period and until the work is accepted. The Contractor shall make whatever arrangements may be necessary to ensure an adequate supply of water to meet the needs for his work. He shall also furnish all necessary hose, equipment, attachments, and accessories for the adequate irrigation of lawns, and planted areas as may be required. Water shall be suitable for irrigation and free from ingredients harmful to plant life.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Time of Planting: When the trench backfill has compacted sufficiently, the Contractor shall commence work on lawns, including fine grading as required.
- B. Soil Placement: Lawn areas shall be plowed to a depth of 6" depressions filled, sticks, and rubbish removed. Following subgrade preparation top soil shall be spaced evenly 6" thick over all lawn and planting areas; prepare surface by raking or other means so as to establish smooth lawn. Apply 20 lbs. of 12-3-6 fertilizer per 1000 sq. ft.
- C. Finish Grading: Areas to be seeded or sodded shall be finished graded, raked, and debris removed. Soft spots and uneven grades shall be eliminated; all slopes of 4 to 1 or

greater shall be mulched. Seed and/or sod shall be sown or layed within 24 hours following application of fertilizer.

D. Grassing:

1. Grassing shall be seeded uniformly at a rate of 10 lbs. to 1000 sq. ft. of area, or as recommended, by use of rotary hand seeders, power sprayers, or other satisfactory equipment, lightly raked, compacted, and watered using fine spray. Seeded areas shall be protected against traffic or other use by placing warning signs or erecting barricades as necessary. Thirty (30) days after seeding, fertilize with 10 lbs. of Seed and Sod 18-24-10 fertilizer per 2500 sq. ft. of lawn area. Protect seeded areas against erosion by spreading straw to be uniform loose depth of 1-1/2 inches, if applied by hand seeders or hydro mulch if applied by hydro-seeding.
2. Sod shall be installed by laying a solid mat of sod blocks where necessary. The sod blocks shall be broken up to "chink" holes left due to mismatched sod blocks or to cover irregular areas.
3. Preparation of Subgrade. Unless otherwise specified, subsoil shall be graded and uniformly compacted so that it will be parallel to proposed finished grade.

E. Landscaping: Install trees and shrubs when authorized by the Owner and/or Engineer.

3.02 CLEANUP

Soil, mulch, or similar materials brought onto paved areas shall be removed promptly, keeping these areas as clean as possible at all times. Upon completion of planting operations, all excess soil, stones, and debris remaining shall be removed from the construction areas.

3.03 LANDSCAPE MAINTENANCE

Maintain landscape work for a period of 90 days immediately following complete installation of work or until Owner accepts the project. Include watering, weeding, cultivating, restoration of grade, mowing and trimming grass, protection from insects and diseases, fertilizing and similar operations as needed to ensure normal growth and good health for live plant material.

3.04 REPAIRS TO LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATIONS

Lawn areas planted under this contract and all lawn areas damaged by the Contractor's operation shall be repaired at once by proper soil preparation, fertilizing, and reseeding or sodding, in accordance with these specifications.

END OF SECTION

SECTION 02999

MISCELLANEOUS WORK AND CLEANUP

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent of work involved. The Contractor shall furnish all labor, materials, equipment and incidentals to complete the work under this section.
- B. The work of the section includes, but is not limited to, the following:
 - 1. Restoring of fences and guard rails
 - 2. Crossing utilities
 - 3. Restoring easements (servitudes) and rights-of-way
 - 4. Cleaning up
 - 5. Incidental work

1.02 WORK SPECIFIED UNDER OTHER SECTIONS

All work shall be completed in a workmanlike manner by competent workmen in full compliance with all applicable sections of these specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

Materials required for this section shall be of at least the same type and quality as materials which are to be restored. Where possible, the Contractor shall reuse existing materials which are removed and then replaced, with the exception of paving.

PART 3 - EXECUTION

3.01 RESTORING OF FENCES AND GUARD RAILS

- A. It may be necessary for the Contractor to remove, store and replace existing fences and guard rails during construction. Only the section directed by the Engineer shall be removed. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced with fencing equal to or better than that damage, and the work shall be satisfactory to the Engineer.

- B. Guard rails in the vicinity of the work shall be protected from damage. If damaged, guard rails shall be replaced in condition equal to or better than that existing before construction began.

3.02 CROSSING UTILITIES

This item shall include any extra work required in crossing culverts, water courses, drains, water mains, and other utilities, including all sheeting and bracing, extra excavation and backfill, or any other work required for the crossing, whether or not shown on the drawings.

3.03 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, AND CABLE TV LINES

The Contractor shall notify the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.

3.04 RESTORING THE EASEMENTS (SERVITUDES) AND RIGHTS-OF-WAY

- A. Portions of the construction may occur in drainage servitudes. The Contractor shall be responsible for all damage to the property due to his operations. He shall protect from injury all walls, fences, pavement, underground facilities, such as water pipe, or other utilities which may be encountered along the easement. If removal and replacement are required, it shall be done in a workmanlike manner so that the replacement is equivalent to that which existed prior to construction.

- B. Existing lawn surfaces damaged by construction shall be re-graded and re-sodded. These areas shall be maintained until all work under this contract has been completed and accepted.

3.05 CLEANING UP

The Contractor shall remove all construction material, excess excavation, buildings, equipment and other debris remaining on the job as a result of construction operations and shall render the site of the work in a neat and orderly condition.

3.06 INCIDENTAL WORK

- A. Do all incidental work not otherwise specified, but obviously necessary, for the proper completion of the contract as specified and as shown on the drawings.
- B. Notice Letter: For each end user of potable water in each mobile home park, as defined as those facilities for which a water meter is being installed as a part of the WORK, CONTRACTOR shall issue and deliver a Notice Letter and/or door hanger within the thirty (30) calendar days from Notice to Proceed. The exact verbiage for the letter/door hanger will be provided to the Contractor by Department of Utilities at the proper time, once the contract is executed.

END OF SECTION

SECTION 03100

CONCRETE FORMWORK

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Wood formwork for cast-in-place concrete, complete with shoring, bracing, and anchorage.
- B. Coordinate installation of items supplied by other sections of work.

1.02 RELATED WORK

Section 05500: Miscellaneous Metal

1.03 QUALITY ASSURANCE

Construct and erect concrete formwork in accordance with ACI 347 and applicable construction safety regulations for place of work.

1.04 REFERENCES

- A. ACI 318 - Building Code Requirements for Reinforced Concrete.
- B. ACI 347 - Recommended Practice for Concrete Formwork.

PART 2 - PRODUCTS

2.01 WOOD FORM MATERIALS

- A. Plywood: Douglas Fir species; solid one side sheathing grade; sound undamaged sheets with clean true edges.
- B. Lumber: Southern Pine species; No. 7 grade; with grade stamp clearly visible.
- C. Nails, spikes, lag bolts, through bolts, anchorages: Sized as required; of sufficient strength and character to maintain formwork in place while pouring concrete.

2.02 PREFABRICATED FORMS

- A. Steel type: Minimum 4 gage well matched, tight fitting, and adequately stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.

- B. Pan type: Removable of sizes and profiles required.

2.03 FORMWORK ACCESSORIES

- A. Form ties: Snap-off metal type of fixed length; minimum working strength of 3000 psi when assembled; free of defects that will leave holes larger than one inch in concrete surface.
- B. Form release agent: Colorless mineral oil which will not stain concrete or impair natural bonding or color characteristics of coating intended for use on concrete.
- C. Fillets of chamfered corners: Rigid foam plastic or wooden type; $\frac{3}{4}$ " x $\frac{3}{4}$ " size; maximum possible lengths.

2.04 ACCEPTABLE MANUFACTURERS

Acceptable manufacturers shall be an approved product listed in LADOTD QPL 29.

PART 3 - EXECUTION

3.01 FORMWORK ERECTION

- A. Verify lines, levels, and centers before proceeding with formwork. Verify that dimensions agree with drawings.
- B. Construct formwork, shoring and bracing to meet design and code requirements, so that resultant finished concrete conforms to required shapes, lines, and dimensions.
- C. Arrange and assemble formwork to permit dismantling and stripping, so that concrete is not damaged during its removal.
- D. Align joints and make watertight, to prevent leakage of mortar disfigured appearance of concrete. Keep form joints to minimum.
- E. Obtain Engineer's review for use of earth forms. When using earth forms, hand-trim sides and bottoms, and remove loose dirt prior to placing concrete.
- F. Arrange forms to allow stripping without removal of principal shores, where and when these are required to remain in place.
- G. Obtain Engineer's review before framing openings in structural members, which is not indicated on drawings.

- H. Provide bracing to ensure stability of formwork. Prop or strengthen previously constructed formwork liable to be overstressed by construction loads.
- I. Provide chamfer strips on external corners of beams.
- J. Construct formwork to maintain following maximum tolerances.
 - 1. Deviation from horizontal and vertical lines.
 - a. 1/4 inch in 10 feet.
 - b. 3/8 inch in 20 feet.
 - c. 3/4 inch in 40 feet.
- K. Apply form release agent on formwork in accordance with manufacturer's recommendations. Apply prior to placing reinforcing steel, anchoring devices, and embedded items.
- L. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.02 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for pipes, conduits, sleeves, and other work embedded in and passing through concrete members.
- B. Locate and set in place items which will be cast directly into concrete.
- C. Coordinate work of other sections and cooperate with trade involved in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts. Do not perform work unless specifically indicated on drawings or reviewed prior to installation.
- D. Install concrete accessories in accordance with manufacturer's recommendations; straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Place formed construction joints in pattern pouring sequence. Set top screed to required elevations. Secure to resist movement of wet concrete.
- F. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain. Close temporary ports or openings with tight fitting panels, flush with inside face of forms, neatly fitted so that joints will not be apparent in exposed concrete surfaces.

3.03 FIELD QUALITY CONTROL

- A. Inspect and check completed formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and parts are secure.
- B. Inform Engineer when formwork is complete and has been cleaned, to allow for inspection. Obtain review prior to placing concrete.
- C. Allow Engineer to inspect each section of used formwork prior to reuse.

3.04 CLEANING

Clean forms as erection proceeds, to remove foreign matter. Remove cuttings, shavings, and debris from within forms. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.

3.05 FORM REMOVAL

- A. Notify Engineer prior to removing formwork.
- B. Do not remove forms, shores, and bracing until concrete has gained sufficient strength to carry its own weight, construction and design loads which are liable to be imposed upon it. Verify strength of concrete by compressive test results.
- C. Remove formwork progressively and in accordance with code requirements and so that no shock loads or unbalanced loads are imposed on structure.
- D. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against concrete surfaces.
- E. Leave forms loosely in place, against vertical surfaces, for protection until complete removal is reviewed by Engineer
- F. Store removed forms, for exposed architectural concrete, in manner that surfaces to be in contact with fresh concrete will not be damaged. Marked or scored forms will be rejected.
- G. Re-shore structural members where required due to design requirements or construction conditions and as required to permit progressive construction. Remove load supporting forms only when concrete has attained 75 percent of required 28-day compressive strength, provided construction is re-shored.
- H. Remove forms not directly supporting weight of concrete as soon as stripping operations will not damage concrete.

END OF SECTION

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Reinforcing steel bars, welded steel wire fabric, and fabricated steel bar or rod mats for cast-in-place concrete, complete with tie wire.
- B. Support chairs, bolsters, bars supports, spacers for reinforcing.

1.02 RELATED WORK

- A. Section 03300: Cast-in-Place Concrete
- B. Section 03350: Concrete Finishes

1.03 QUALITY ASSURANCE

Perform concrete reinforcing work in accordance with CRSI PRB unless specified otherwise in this section.

1.04 REFERENCES

- A. ACI 318 - Building Code Requirements for Reinforced Concrete
- B. CRSI PRB - Placing Reinforcing Bars
- C. ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement
- D. ASTM A615 - Deformed and Plain Carbon Steel Bars for Concrete Reinforcement
- E. ASTM A616 - Rail Steel Deformed and Plain Bars for Concrete Reinforcement
- F. ASTM A617 - Axle Steel Deformed and Plain Bars for Concrete Reinforcement
- G. ASTM A497 – Steel Welded Wire Reinforcement, Deformed, for Concrete.
- H. AWS D1.4 – Structural Welding Code, Reinforcing Steel.
- I. ACI 315 - American Concrete Institute – Details and Detailing of Concrete Reinforcement.

1.05 SHOP DRAWINGS

- A. Submit shop drawings in accordance with Section 01340.
- B. Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.
- C. Prepare shop drawings under seal of Professional Structural Engineer registered in the State of Louisiana.

PART 2 - PRODUCTS

2.01 REINFORCING

- A. Reinforcing steel: Comply with ASTM A615, Grade 60.
- B. Welded steel wire fabric: Comply with ASTM A185.

2.02 ACCESSORY MATERIALS

- A. Tie wire: minimum 16-gauge annealed type, or patented system accepted by Engineer.
- B. Chairs, bolsters, bar supports, spacers: Sized and shaped for strength and support of reinforcing during construction conditions.
- C. Special chairs, bolsters, bar supports, spacers (where adjacent to architectural concrete surfaces) plastic coated type; sized and shaped as required.

2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with ACI 315.
- B. Locate reinforcing splices, not indicated on drawings, at points of minimum stress. Location of splices shall be reviewed by Engineer.
- C. Where indicated, weld reinforcing bars in accordance with AWS D1.4.

PART 3 - EXECUTION

3.01 CONCRETE PROTECTION FOR REINFORCEMENT

- A. Place and hold steel reinforcement in position so the concrete cover, as measured from the surface of the bar, will be the following, except as otherwise specified or indicated on the Drawings:

1. Cast-in-place concrete (nonprestressed). The following minimum concrete cover shall be provided for reinforcement:

Exposure Conditions	Minimum Cover in Inches (in.)
Concrete cast against and permanently exposed to earth	3
Concrete exposed to earth or weather:	
#6 Through #18 Bars	2
#5 bar, W31 or D31 wire, and smaller	1 ½
Concrete not exposed to weather or in contact with ground for slabs, walls, joints:	
#14 and #18 bars	1 ½
#11 bar and smaller	1 ½
Primary reinforcement, ties, stirrups, spirals for beams and columns	1 ½

2. For precast concrete (manufactured under plant control conditions), the following minimum concrete cover shall be provided for reinforcement:

Exposure Conditions	Minimum Cover in Inches (in.)
Concrete exposed to earth or weather	
Wall panels	
#14 and #18 bars	1 ½
#11 bars and smaller	¾
Other Members	
#14 and #18 bars	2
#6 through #11 bars	1 ½
#5 bar, W31 or D31 wire, and smaller	1 ¼
Concrete not exposed to weather or in contact with the ground	
#14 and #18 bars	1 ¼
#11 bar and smaller	5/8
Beams and columns:	
Primary reinforcement	Nominal Diameter of Bar, Wire or Strand but not less than 5/8 and need not exceeding 1
Ties, stirrups, and spirals	3/8

3.02 PLACING

- A. Support and wire all reinforcing bars together to prevent displacement by construction loads or the placing of concrete beyond the tolerances specified. Use supporting concrete blocks on ground surfaces. Use concrete, metal, or plastic bar chairs, over forms. The portion of all accessories in contact with the formwork shall be plastic, galvanized or plastic coated where the concrete surface will be exposed to the weather in the finished structure, or where rust would impair architectural finishes.
- B. Furnish and set templates for all column dowels to insure proper placement.
- C. Splices, when approved by the Engineer, may be used at locations not shown on the Drawings. All splices shall comply with Standard Structural Details.
- D. Reinforcement shall not be bent after being embedded in hardened concrete unless approved by the Engineer.
- E. Bars may be moved as necessary to avoid interference with other reinforcing steel conduits, or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be subject to approval by the Engineer.

3.03 FIELD QUALITY CONTROL

- A. Physical properties of reinforcing steel are subject to testing by an independent laboratory for compliance with ASTM A-615. The Contractor shall furnish all samples required for such testing.
- B. The Contractor shall give the Engineer twenty-four (24) hour notice of the completion of reinforcing steel setting, and sufficient time before the start of concrete placement to inspect the layout and for Contractor to make any required corrections.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

Contractor shall furnish all labor, materials, tools, equipment and related items required to do the cast-in-place concrete work as specified herein.

1.02 RELATED WORK

- A. Section 03100: Concrete Formwork
- B. Section 03200: Concrete Reinforcement
- C. Section 05500: Miscellaneous Metal

1.03 QUALITY ASSURANCE

Perform cast-in-place concrete work in accordance with ACI 318, unless specified otherwise in this section.

1.04 TESTING LABORATORY SERVICES

- A. Inspection and testing will be performed by firm in accordance with Section 01410.
- B. Provide free access to work and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to Engineer for review prior to commencement of work.
- D. Tests of cement and aggregates may be performed to ensure conformance with requirements stated herein.
- E. Minimum four concrete test cylinders will be taken for every pour.
- F. One slump test will be taken for each set of test cylinders taken as a minimum: However, slump tests will be taken as often as required by the Engineer or his representative.

1.05 REFERENCES

- A. ASTM C33 - Concrete Aggregates

- B. ASTM C150 - Portland Cement
- C. ACI 318 - Building Code Requirements for Reinforced Concrete
- D. ASTM C260 - Air Entraining Admixtures for Concrete
- E. ASTM C494 - Chemical Admixtures for Concrete
- F. ASTM C94 - Ready-Mixed Concrete
- G. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete
- H. ACI 305 - Recommended Practice for Hot Weather Concreting
- I. ACI 306 - Recommended Practice for Cold Weather Concreting
- J. ACI 301 - Specifications for Structural Concrete

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cement: Normal-Type II, High early strength-Type III, Portland type, ASTM C150.
- B. Fine and Coarse Aggregates: ASTM C33. At the time of its use, the aggregate shall be free from all foreign material or dirt which may become mixed with the aggregate stockpile. If less than 2% of the fine aggregate passes a No. 100 sieve, limestone dust shall be added to provide this minimum percentage.
- C. Water: Clean, fresh and free from injurious amounts of oil, alkali, organic matter, or other deleterious material.

2.02 ADMIXTURES

Each of the following admixtures shall be used when required and shall be used when so instructed by the Owner. They shall comply with the appropriate specifications as indicated.

- A. Air Entrainment: ASTM C260.
- B. Chemical: ASTM C494 Type A - water reducing and Type B - retarding admixture.

2.03 ACCEPTABLE MANUFACTURERS

The Acceptable Manufacturers of ready mix concrete must have sufficient plant capacity

and ready mix transportation trucks to insure a continuous delivery to the job site; the rate should be such that the interval between batches shall not exceed 20 minutes. The methods of delivering the concrete shall be such that they will facilitate its placing with a minimum of rehandling and without damaging the concrete or its forms.

2.04 ACCESSORIES

- A. Bonding Agent: Two component modified epoxy resin; Non-solvent two component polysulphide-epoxy; Mineral filled polysulphide polymer epoxy resin. Acceptable manufacturers shall be an approved product listed in LADOTD QPL 32.
- B. Non-shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2400 psi in 2 days and 7000 psi in 28 days.

2.05 CONCRETE MIXES

- A. Mix concrete in accordance with ASTM C94.
- B. Provide concrete of following strength:
 - 1. Compressive strength 4000 psi.
 - 2. Select proportions for normal weight concrete in accordance with ACI 301 3.8 by Method 1, Method 2, or Method 3. Add air entraining agent to concrete to entrain air as indicated in ACI 301 Table 3.4.1.
- B. Add air entraining agent to concrete mix for concrete work exposed to exterior.
- D. Weather Conditions
 - 1. Cold Weather
 - a. The minimum temperature of the concrete when delivered at the site of the work shall conform to the following temperature limitation:

Air Temperatures, °F.	For Sections Less than 12” Thick, Minimum Concrete Temperature, °F.	For Sections between 12” and 36” Thick, Minimum Concrete Temperature, °F.
30 to 45	60	50
0 to 30	65	55
Below 0	70	60

- 2. Provisions shall be made for maintaining concrete moist and at a minimum

temperature of not less than 50°F for a period of at least 7 days.

3. Hot Weather

- a. The maximum temperature of the concrete when delivered at the site of the work shall not exceed 85 degrees Fahrenheit.
- b. The ingredients shall be cooled before mixing, or flake ice or well-crushed ice of a size that will melt completely during mixing may be substituted for all or part of the mixing water if necessary to maintain the temperature of the concrete below 85 degrees Fahrenheit.
- c. A retarding agent complying with ASTM C-494 Type B shall be used under the following circumstances:
 - i. If the temperature of the air is above 85 degrees Fahrenheit.
 - ii. If the temperature of the concrete as placed is above 80 degrees Fahrenheit.
 - iii. Where large pours are permitted, to allow all portions to remain plastic until adjacent concrete is placed.

2.06 CIP CONCRETE SANITARY SEWER STRUCTURES

- A. CIP concrete used in sewer structures shall be waterproofed with a crystalline concrete waterproofing additive. The concrete waterproofing admixture shall be of the cementitious crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete.
- B. The design shall include the use of the crystalline waterproofing repair materials that generate a non-soluble crystalline formation in the concrete.
- C. The waterproofing product shall be Xypex Admix C-1000R at a rate of 20 lbs. per cubic yard containing red dye, to ensure detection in the final concrete product, as manufactured by Xypex Chemical Corporation, Richmond, B.C., Canada, or an equivalent material as approved by the Engineer. For finishing of cut outs, repairs and patching, Xypex Concentrate or an approved equivalent shall be applied as indicated below. Concrete used in wet wells, structures within one hundred feet (100') of wet wells, structures eight feet (8') or greater in depth and structures with force main discharges shall be additionally fortified with Conshield.
- D. For exposed concrete Xypex Admix C1000 at a rate of 15 pounds per cubic yard, no dye shall be used. The Contractor shall supply documentation that Xypex was added at the plant. Concrete used in wet wells, structures within one hundred feet (100') of wet wells, structures eight feet (8') or greater in depth and structures with force main discharges shall be additionally fortified with Conshield.
- E. Fiberglass, polymer concrete by; "U.S. COMPOSITE PIPE, INC." or approved equal, or concrete "fortified with Conshied" (in addition to Xypex), is required for lift station wet wells, and manholes within close proximity (100 yards) of lift stations, deep (8 feet and above) manholes and any manhole which is or will be receiving a

force main.

PART 3 - EXECUTION

3.01 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304.
- B. Notify Engineer minimum 24 hours prior to commencement of concreting operations.
- C. Verify anchors, seats, plates, and other items to be cast into concrete are placed, held securely, and will not cause hardship in placing concrete. Rectify same and proceed with work.
- D. Maintain records of poured concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.
- E. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints, are not disturbed during concrete placement.
- F. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.
- G. Conform to ACI 305 when concreting during hot weather.
- H. Conform to ACI 306 when concreting during cold weather.

3.02 PATCHING

Allow Engineer to inspect concrete surfaces immediately upon removal of forms. Patch imperfections as directed.

3.03 DEFECTIVE CONCRETE

- A. Modify or replace concrete not conforming to required lines, details and elevations.
- B. Repair or replace concrete not properly placed resulting in excessive honeycombing and other defects. Do not patch, fill touch-up, repair, or replace concrete except upon express direction of Engineer for each individual area.

3.04 CURING AND PROTECTION

Beginning immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration

of cement and hardening of concrete.

END OF SECTION

SECTION 03350

CONCRETE FINISHES

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment, and incidentals required to finish cast-in-place concrete surfaces as specified herein.

1.02 RELATED WORK

Patching and repair of defective and honeycombed concrete is included in Section 03300.

1.03 SUBMITTALS

Submit to the Engineer as provided in the General Conditions and Section 01340, the proposed chemical hardener manufacturers' surface preparation and application procedures.

1.04 SCHEDULE OF FINISHES

- A. Concrete for the project shall be finished in the various specified manners either to remain as natural concrete or to receive an additional applied finish or material under another section.
- B. The base concrete for the following conditions shall be finished as noted and as further specified herein:
 - 1. Concrete to receive waterproofing and dampproofing - Off-form finish.
 - 2. Exterior exposed concrete slabs, walkways and stairs - broomed finish.
 - 3. Concrete on which liquids flow - steel trowel finish.
 - 4. Concrete where not exposed in the finished work and not scheduled to receive an additional applied finish or material - Off-form finish.

1.05 RESPONSIBILITY FOR CHANGING FINISHES

- A. The surface finishes specified for concrete to receive additional applied finishes or materials are the finishes required for the proper application of the actual products specified under other sections. Where different products are approved for use, it shall be the Contractor's responsibility to determine if changes in finishes are required and to provide the proper finishes to receive these products.
- B. Changes in finishes made to accommodate products different from those specified shall be performed at no additional cost to the Owner. Submit the proposed new finishes and their construction methods to the Engineer for approval.

PART 2 - PRODUCTS

2.01 MATERIALS

Portland cement and component materials required for finishing the concrete surfaces shall be as specified in Section 03300.

PART 3 - EXECUTION

3.01 FORMED SURFACES

- A. Forms shall not be stripped before the concrete has attained a strength of at least 30 percent (30%) of the ultimate design strength. This is equivalent to approximately "100-day degrees" of moist curing.
- B. Care shall be exercised to prevent damaging edges or obliterating the lines of chamfers or corners when removing the forms or doing any work or work adjacent thereto.
- C. Clean all exposed concrete surfaces and adjoining work stained by leakage of concrete, to the satisfaction of the Engineer.
- D. Off-form finish. Fins and other projections shall be removed as approved. Tie cone holes and other minor defects shall have been filled under Section 03300.

3.02 FLOORS AND SLABS

- A. Floors and slabs shall be screeded to the established grades and shall be level with a tolerance of 1/8" when checked with a 12' straightedge, except where drains occur, in which case floors shall be pitched to drains as indicated. Failure to meet either of above shall be cause for removal, grinding, or other correction as directed by the Engineer.
- B. Following screeding as specified above, power steel trowel as follows:
 - 1. Immediately after final screeding a dry cement/sand shake in the proportion of two (2) sacks of portland cement to 350 pounds of coarse natural concrete sand shall be sprinkled evenly over the surface at the rate of approximately 500 pounds per 1,000 square feet of floor. Neat, dry cement shall not be sprinkled on the surface. This shake shall be thoroughly floated into the surface with an approved disc type power compacting machine weighing at least 200 pounds if a 20" disc is used or 300 pounds if a 24" disc is used. A mechanical blade-type float or trowel is not acceptable for this work.

Note: This operation (application of the cement/sand shake) may be eliminated at the discretion of the Engineer if the base slab concrete exhibits adequate fatness and homogeneity, and the need is not indicated.

2. In lieu of power steel troweling, small areas as defined by the Engineer shall be compacted by hand steel troweling with the dry cement/sand shake as ordered.
 3. The floor or slab shall be compacted to a smooth surface and the floating operation continued until sufficient mortar is brought to the surface to fill all voids. The surfaces shall be tested with a straightedge to detect high and low spots which shall be eliminated.
 4. Compaction shall be continued only until thorough densification is attained and a small amount of mortar is brought to the surface. Excessive floating shall be avoided.
- C. After Paragraph 3.02-A and B procedures are accomplished, floors and slabs for particular conditions shall be completed as scheduled in one of the following finishes:
1. Wood float finish. Hand wood float, maintaining the surface tolerance to provide a grained, non-slip finish as approved.
 2. Broomed finish. Hand wood float maintaining the surface tolerance and then broom with a stiff bristle broom in the direction of drainage to provide a non-slip finish as approved.
 3. Steel trowel finish. Hand steel trowel to a perfectly smooth, hard even finish free from high or low spots or other defects as approved.

3.03 APPROVAL OF FINISHES

- A. All concrete surfaces will be inspected during the finishing process by the Engineer.
- B. Surfaces which, in the opinion of the Engineer, are unsatisfactory shall be refinished or reworked until approved by the Engineer.

END OF SECTION

SECTION 03455

MANHOLES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all materials, labor, and equipment and construct manholes consisting of precast sections or cast-in-place as shown on the drawings and specified herein.
- B. The Contractor shall construct watertight structures.
- C. All cast-in-place manholes and structures shall meet the requirements of the latest edition of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges Section 702 and the drawings.

1.02 RELATED WORK NOT INCLUDED

- A. Section 02221: Earth Excavation and Backfill in Trenches.
- B. Section 03300: Cast-in-Place Concrete
- C. Section 05500: Miscellaneous Metal
- D. Section 09800: Special Coatings

1.03 SUBMITTALS

Submit to the Engineer, as provided in the contract documents, shop drawings showing details of construction, reinforcing, and joints.

1.04 INSPECTION

- A. The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer, or other representatives of the Owner. Such inspection may be made at the place of manufacture, or at the site after delivery, or at both places, and the sections shall be subject to rejection at any time on account of failure to meet any of the specification requirements; even though sample sections may have been accepted as satisfactory at the place of manufacture. Sections rejected after delivery to the job shall be marked for identification and shall be removed from the job at once. All sections, which have been damaged after delivery will be rejected, and if already installed, shall be acceptably repaired, if permitted, or removed and replaced, entirely at the Contractor's expense.

- B. At the time of inspection, the sections will be carefully examined for compliance with the ASTM designation specified below and these specifications, and with the approved manufacturer's drawings. All sections shall be inspected for general appearance, dimension, "scratch-strength", blisters, cracks, roughness, soundness, etc. The surface shall be dense and close-textured.
- C. Imperfections may be repaired, subject to the approval of the Engineer, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final approval. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at the end of 7 days and 5,000 psi at the end of 28 days, when tested in 3" by 6" cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs subject to the approval of the Engineer.

1.05 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

- 1. ASTM C443– Standard Method for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
- 2. ASTM C478 – Standard Method for Precast Reinforced Concrete Manhole Sections

PART 2 - PRODUCTS

2.01 PRECAST CONCRETE SECTIONS

A. Precast concrete manhole barrel and eccentric top sections shall conform to the specifications for Precast Reinforced Concrete Manhole sections, ASTM Designation C478, except as otherwise specified below. The method of construction shall conform to the drawings and the following additional requirements.

- 1. The minimum wall thickness for the various size barrel sections shall be as listed below.

Inside Diameter of Barrel	Minimum Wall Thickness
48"	5"
60"	6"
72"	7"

Note: See Section 8 below

- 2. Barrel sections shall have tongue and groove joints. Joints shall have round rubber gaskets set in specially provided indentations. The round rubber "O"-ring gasket shall conform to ASTM C443 standard specifications.
- 3. Type II cement shall be used except as otherwise approved.
- 4. The date of manufacture and the name or trademark of the manufacturer shall be

clearly marked on the inside of each precast section.

5. Sections shall be cured by an approved method and shall not be shipped until at least five (5) days after having been fabricated.
6. Top sections shall be eccentric except that precast concrete slabs shall be used where cover over the top of the pipe is less than four feet (4') for all manholes. Top sections for quick connect coupling manholes shall be concentric as shown on the drawings.
7. Precast concrete slabs over top section, where required, shall be capable of supporting the overburden plus a live load equivalent to AASHTO H-20 loading.
8. The tops of bases shall be suitably shaped to mate the precast barrel section.

2.02 PRECAST SANITARY SEWER MANHOLES

- A. Precast sanitary sewer manholes shall be waterproofed with a crystalline concrete waterproofing for precast concrete manholes. The concrete waterproofing admixture shall be of the cementitious crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete.
- B. The design shall include the use of the crystalline waterproofing repair materials that generate a non-soluble crystalline formation in the concrete.
- C. The waterproofing product shall be Xypex Admix C-1000R at a rate of 20lbs per cubic yard containing red dye, to ensure detection in the final concrete product, as manufactured by Xypex Chemical Corporation, Richmond, B.C., Canada, or an equivalent material as approved by the Engineer. For finishing of cut outs, repairs and patching, Xypex Concentrate or an approved equivalent shall be applied as indicated below. Concrete used in wet wells, structures within one hundred feet (100') of wet wells, structures eight feet (8') or greater in depth and structures with force main discharges shall be additionally fortified with Conshield.
- D. Fiberglass, polymer concrete by; "U.S. COMPOSITE PIPE, INC." or approved equal, or concrete "fortified with Conshield" (in addition to Xypex), is required for lift station wet wells, and manholes within close proximity (100 yards) of lift stations, deep (8 feet and above) manholes and any manhole which is or will be receiving a force main.
- E. Rejection of Precast Products: Should any precast structure arrive on site without the Xypex or Conshield additive the CONTRACTOR shall promptly notify the ENGINEER. The OWNER may propose a replacement product or alternative coating systems that shall be applied at the CONTRACTORS expense. The acceptance of the product, replacement product or proposed alternative coating method shall be at the discretion of the OWNER. NO EXCEPTIONS.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Manholes and other precast structures shall be constructed to the dimensions as shown on the drawings and as specified herein.
- B. The base shall be cast-in-place concrete as shown on the drawings and placed on a thoroughly compacted limestone subbase. The tops of the cast-in-place bases shall be shaped to mate with the precast barrel section, and shall be adjusted in grade so that the top of the dome section is at the approximately correct elevation.
- C. Precast bases, conforming to all requirements of ASTM C478 and above listed requirements for precast sections, may be used.
- D. Precast concrete structure sections shall be set so as to be vertical and with sections in true alignment with a 1/4" maximum tolerance to be allowed. The outside and inside joint shall be "ram-nek" or filled with a comparatively dry mortar (one part cement to two parts sand) and finished flush with the adjoining surfaces. If "ram-nek" is used, inside joint shall still be sealed with mortar. Allow joints to set for 24 hours before backfilling. Backfilling shall be done in a careful manner, bringing the fill up evenly on all sides. If leaks appear in the structures, the inside joints shall be caulked with lead wool to the satisfaction of the Engineer. The Contractor shall install the precast section in a manner that will result in a watertight joint.
- E. Holes in the concrete pipe sections required for handling or other purposes shall be plugged with a non-shrinking grout or by grout in combination with concrete plugs.
- F. Where holes must be cut in the precast sections to accommodate pipes, cutting shall be done prior to setting them in place to prevent any subsequent jarring which may loosen the mortar joints.
- G. Cast iron frames specified and furnished shall be placed, shimmed, and set in portland cement mortar to the required grade.
- H. Pipe stub outs for all gravity sewer manhole connections shall not exceed 2 feet in length. Caps or plugs shall be furnished where required. Gravity sewer lines shall be connected to the manhole using flexible, resilient rubber connections in the manhole wall.
- I. Gravity sewer manholes shall have an invert channel shaped to correspond with the lower half of the gravity sewer. The top of the shelf shall be at the elevation nearly equal to the pipe diameter and shall be sloped to drain toward the flow-through channel.

END OF SECTION

SECTION 05500

MISCELLANEOUS METAL

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install covers, grates, frames, manhole rungs, catch basin castings, and other miscellaneous metal as shown on the drawings and specified herein. The miscellaneous metal items include, but are not limited to, the following:
1. Anchors or anchor bolts except those specified to be furnished with all equipment.
 2. Cast iron frames, covers, grates.
 3. Steel pipe casings, plates, angle frames, plates, and miscellaneous angles and channels as shown on the drawings.
 4. Ductile iron joint restraints, glands, restraining glands.

1.02 RELATED WORK

- A. Section 02615
- B. Section 15100.

1.03 COORDINATION

- A. The work of this section shall be completely coordinated with the work of other sections. Verify at the site both the dimensions and work of other trades adjoining items of work in this section before fabrication and installation of items herein specified.
- B. Furnish to the pertinent trades all items included under this section that are to be built into the work of other sections.

1.04 SHOP DRAWINGS

Detail drawings, as provided for in the General Conditions and Section 01340, showing sizes of members, method of assembly, anchorage, and connection to other members shall be submitted to the Engineer for approval before fabrication.

1.05 FIELD MEASUREMENTS

Field measurements shall be taken at the site to verify or supplement indicated dimensions and to insure proper fitting of all items.

1.06 REFERENCE SPECIFICATIONS

Unless otherwise specified, materials shall conform to the following:

Carbon Structural Steel	ASTM A36
Welded and Seamless Steel Pipe	ASTM A53
Gray Iron Castings	ASTM A48, Class 30
Galvanizing, general	ASTM A123
Galvanizing, hardware	ASTM A153
Galvanizing, assemblies	ASTM A386
Aluminum (extruded shapes)	ASTM B209, 6063 T5 (Alum. alloy)
Aluminum (extruded pipe)	ASTM B209, 6063 T6 (Alum. alloy)
Aluminum Sheet and Plate	ASTM B209, 6061 T6 (Alum. alloy)
Bolts and Nuts	ASTM A307
Stainless Steel Bolts, Bars, Shapes	AISI, Type 302
Stainless Steel Plate and Sheet	AISI, Type 304
Welding Rods for Steel	AWS Spec. for Arc Welding

PART 2 - PRODUCTS

2.01 ANCHORS, BOLTS, AND FASTENING DEVICES

- A. Anchors, bolts, etc., shall be furnished as necessary for installation of the work of this section.
- B. The bolts used to attach the various members to the anchors shall be the sizes shown or required.
- C. Wedge anchors shall be an imperial-sized steel threaded stud with an integral cone expander and a three-segment expansion clip. The stud shall be manufactured from carbon steel unless specified as stainless and the expansion clip shall have two undercutting embossments per segment and be manufactured from 316 stainless steel. The anchor shall have been tested and qualified for performance in cracked concrete per ACI 355.2 and ICC-ES AC193. Material shall be as noted on the drawings. If not listed, galvanized steel.

2.02 STEEL ITEMS

- A. Galvanized steel grating shall be fabricated as shown. Angle frames for hatches, beams, grates, etc., shall be furnished complete with welded strap anchors attached. Furnish all miscellaneous aluminum shown but not otherwise detailed.
- B. Sleeves shall be steel or cast-iron pipe in walls and floors with end joints as shown on the drawings. All pipe sleeves shall have center anchor around circumference as shown.
- C. Miscellaneous steel pipe for sleeves and lifting attachments and other uses as required

shall be Schedule 40 pipe fabricated according to the details as shown on the drawings.

- D. Miscellaneous steel shall be fabricated and installed in accordance with the drawings and shall include; angles, support brackets, splice plates, anchor bolts; and any other miscellaneous steel called for on the drawings and not otherwise specified.

2.03 CAST IRON FRAMES AND COVERS

- A. Heavy duty manhole frame and cover shall be as manufactured by East Jordan Iron Works, Inc., Pattern V1503 standard size or approved equal. Covers to have letters "WATER", "SEWER" or "DRAIN" embossed on top, as required.
- B. Valve Boxes: Valve boxes shall be of strong, tough even-grained cast iron. Valve boxes shall be two-part screw type adjustable with covers having the word "SEWER" or "WATER" embossed on top as applicable. Valve boxes shall be screw type with drop a lid, unless otherwise specified.
- C. Catch Basins: Catch basin frames and covers shall be Vulcan Foundry No. V-4311-1 or approved equal, unless otherwise shown on the Drawings.

2.04 HATCHES

A. Direct Traffic Condition:

The floor access doors shall be galvanized steel, AASHTO H20-44 wheel load rated. Manufacturer must provide structural calculations, stamped by a registered professional engineer, that certify that the door design meets the requirements of AASHTO H20-44.

Galvanized steel hatches shall be a minimum 1/2 inch thick slip resistant plate reinforced to an AASHTO H20-44 wheel load with 30% impact factor. The frame shall be a minimum 1/2" inch thick steel angle with welded nelson stud anchors or other approved embedment anchors. The entire frame shall be supported by concrete or other material designed to support the cover loading. The frame and cover shall have recessed 316 SS special bolting to allow for Direct Continuous H20 Traffic Loading. The floor access door shall be equipped with a flush steel lifting handle that does not protrude above the cover. The floor access doors shall be equipped with 316 SS lifting assist mechanism(s) and automatic locking hold open arms. The doors shall have a watertight stainless steel slam lock operated by a removable key from the outside and by a fixed handle inside. The doors shall have a recessed staple for padlock consisting of a fabricated steel box and a hinged lid with bolt lock for access to the padlock. A steel skirt shall be welded to the frame to provide a combined height equal to the depth of the concrete slab. The floor access doors and frame shall be hot-dipped galvanized after fabrication. The Hatch Access unit shall also incorporate a fall through protection system consisting of hinged aluminum safety grating with lifting handle(s) and 316 SS hardware. The Installation shall be in accordance with the manufacturer's attached instructions. Manufacturer shall guarantee against defects in materials and workmanship for a period of five (5) years.

B. In Direct Traffic Condition

The floor access doors and frame material shall be aluminum and AASHTO H-20 wheel load rated. Approved manufactures are U.S.F Fabrication, Inc., Babcock Davis, LW Products or approved equal. Manufacturer must provide structural calculations, stamped by a registered professional engineer, that certify that the door design meets the requirements of AASHTO H20. Door leafs shall be a minimum ¼ inch thick aluminum slip resistant plate reinforced to an AASHTO H-20 wheel load. The frame shall have sufficient anchors for concrete embedment. The entire frame shall be supported by concrete or other material designed to support the cover loading. The floor access door shall be equipped with a flush 316 SS lifting handle that does not protrude above the cover. The floor access doors shall be equipped with 316 SS lifting assist mechanism(s) and automatic locking hold open arms. The doors shall have a watertight stainless steel slam lock operated by a removable key from the outside and by a fixed handle inside. The doors shall have a recessed staple for padlock consisting of a fabricated box and a hinged lid with bolt lock for access to the padlock. A aluminum skirt shall be welded to the frame to provide a combined height equal to the depth of the concrete slab. The Hatch Access unit shall also incorporate a fall through protection system consisting of hinged aluminum safety grating with lifting handle(s) and 316 SS hardware. The Installation shall be in accordance with the manufacturer's attached instructions. Manufacturer shall guarantee against defects in materials and workmanship for a period of five (5) years.

PART 3 - EXECUTION

3.01 FABRICATION

- A. All miscellaneous metal work shall be formed true to detail, with clean, straight, sharply defined profiles and smooth surfaces of uniform color and texture and free from defects impairing strength or durability.
- B. Connections and accessories shall be of sufficient strength to safely withstand stresses and strains to which they will be subjected. Steel accessories and connections to steel or cast iron shall be steel, unless otherwise specified. Threaded connections shall be made so that the threads are concealed by fitting.
- C. Welded joints shall be rigid and continuously welded or spot welded as specified or shown. The face of welds shall be dressed flush and smooth. Exposed joints shall be close fitting and jointed where least conspicuous.
- D. Welding of parts shall be in accordance with the Standard Code for Arc and Gas Welding in Building Construction of the AWS and shall only be done where shown, specified, or permitted by the Engineer. All welding shall be done only by welders certified as to their ability to perform welding in accordance with the requirements of the AWS Code. Component parts of built-up members to be welded shall be adequately

supported and clamped or held by other adequate means to hold the parts in proper relation for welding.

- E. Welding of aluminum shall conform to the applicable provisions of the AA-30 for aluminum structures. The general recommendations and regulations of AWS D1.1 as applicable shall apply to welded aluminum.
- F. Castings shall be of good quality, strong, tough, even-grained, smooth, free from scale, lumps, blisters, sand holes, and defects of any kind which render them unfit for the service for which they are intended. Castings shall be thoroughly cleaned and will be subjected to a hammer inspection in the field by the Engineer. All finished surfaces shown on the drawings and/or specified shall be machined to a true plane surface and shall be true and seat at all points without rocking. Allowances shall be made in the patterns so that the thickness specified or shown shall not be reduced in obtaining finished surfaces. Castings will not be acceptable if the actual weight is less than 95 percent of the theoretical weight computed from the dimensions shown. The Contractor shall provide facilities for weighing castings in the presence of the Engineer showing true weights, certified by the supplier.
- G. All steel finish work shall be thoroughly cleaned, by effective means, of all loose mill scale, rust, and foreign matter before shipment and shall be given one shop coat of primer compatible with finish coats specified in Painting Section after fabrication but before shipping. Paint shall be applied to dry surfaces and shall be thoroughly and evenly spread and well worked into joints and other open spaces. Abrasions in the field shall be touched up with primer immediately after erection.
- H. Galvanizing, where required, shall be the hot-dip zinc process after fabrication. Following all manufacturing operations, all items to be galvanized shall be thoroughly cleaned, pickled, fluxed, and completely immersed in a bath of molten zinc. The resulting coating shall be adherent and shall be the normal coating to be obtained by immersing the items in a bath of molten zinc and allowing them to remain in the bath until their temperature becomes the same as the bath. Coating shall be not less than 2 oz. per sq. ft. of surface.

3.02 INSTALLATION

- A. All steel surfaces to come in contact with exposed concrete shall receive a protective coating of an approved heavy bitumastic troweling mastic applied in accordance with the manufacturer's instructions prior to installation.
- B. Where aluminum contacts a dis-similar metal, apply a heavy brush coat of zinc-chromate primer followed by two coats of aluminum metal and masonry paint to the dis-similar metal.
- C. Where aluminum contacts concrete, apply a heavy coat of approved alkali resistant paint to the concrete.

END OF SECTION

SECTION 15100

VALVES AND APPURTENANCES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required to install and make ready for operation all valves and appurtenances as shown on the drawings and as specified herein.
- B. The equipment shall include, but not be limited to, the following:
 - 1. Pressure Gauges
 - 2. Quick Connect Couplings
 - 3. Air Release Valves
 - 4. Plug Valves
 - 5. Gate Valves
 - 6. Check Valves

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02221: Excavation and Backfill of Trenched.
- B. Section 02515: HDPE Pipe
- C. Section 02622: PVC Pipe.
- D. Section 02701: Water Mains.

1.03 DESCRIPTION OF SYSTEMS

All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of wastewater.

1.04 QUALIFICATIONS

All of the types of valves and appurtenances shall be products of well established reputable firms who are fully experienced, reputable and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with standard practices and methods and shall comply with these specifications as applicable.

1.05 SUBMITTALS

- A. Submit to the Engineer, within 30 days after execution of the contract, a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. Complete shop drawings of all valves and appurtenances shall be submitted to the Engineer for approval in accordance with the requirements of Section 01340 and the General Conditions.

1.06 TOOLS

Special tools, if required for normal operation and maintenance, shall be supplied with the equipment.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Valves:

1. Gate Valves

- a. Gate valves shall be double disc parallel seat, iron body, bronze mounted, side wedge type. They shall comply with AWWA C500 as latest revised.
- b. Gate valves shall be rated at 200 psi water working pressure with 400 psi hydrostatic test for structural soundness for 2" through 12" and 150 psi water working pressure with 300 psi hydrostatic test for structural soundness in 20" size. Testing shall be conducted in accordance with AWWA C500.
- c. End connections shall be in accordance with ANSI B 16.1 125# flange drilling and mechanical joints per AWWA C111 without accessories.
- d. All ductile iron shall comply with ASTM A536 Gr. 65-45-12. Castings shall be clean and sound without defects. No plugging or welding of defects will be allowed.
- e. Stems shall be manganese bronze having a minimum tensile strength of 60,000 psi and a minimum yield of 20,000 psi for 20" valve.
- f. Bolts shall be electro-zinc plated steel with hex heads and hex nuts in accordance with ASTM A307 and ASTM A563 respectively.
- g. Gate valves shall be non-rising stem (NRS) meeting requirements of AWWA C500. Valves shall be furnished o-ring stem seals using 2 o-rings set in the seal plate.
- h. Discs for valve sizes 2" through 4" shall be bronze; for sizes 6" and larger, they shall be cast iron bronze faced. Bronze facing shall be machine after insertion into disc face. Disc spreaders for valves 2" through 8" shall be bronze. Disc spreaders for valves 10" through 20" shall be cast iron with

bronze faced. Spreaders shall actuate from stem nut independent from valve body.

- i. Direction to open shall be counter-clockwise unless otherwise specified.
- j. The inside and outside of all valves, together with all working parts except bronze and machined faces, shall be coated in accordance with AWWA standards.
- k. Marking shall be in accordance with AWWA C500 standards, to include name of manufacturer, year of manufacture, maximum working pressure and size of valve.
- l. Valves must be of domestic United States of America.
- m. Valves shall be manufactured by Mueller Company, LLC. of Tennessee. Other manufacturers shall be submitted and approved by Tammany Utilities prior to use.

2. Eccentric Plug Valves

- a. Plug valves shall be solid one piece, cast of ASTM A536 ductile iron. The plug shall have a cylindrical seating surface eccentrically offset from the center of the shaft. Plug shall not contact the seat prior to 90% closed. Plug facing shall be Chloroprene (CR), or other resilient facing suitable for the application.
- b. Plugs shall be solid one piece, cast of ASTM A536 ductile iron. The plug shall have a cylindrical seating surface eccentrically offset from the center of the shaft. Plug shall not contact the seat prior to 90% closed. Plug facing shall be Chloroprene (CR), or other resilient facing suitable for the application.
- c. Seats shall be 1/8" thick welded overlay of not less than 95% pure nickel. Seat shall be at least 1/2" wide and raised. The raised surface shall be completely covered with nickel to insure that the resilient plug face contacts only the nickel seat.
- d. Adjustable Packing shall be of the multiple V-ring type, with a packing gland follower. Shaft seals shall permit inspection, adjustment or complete replacement of packing without disturbing any part of the valve or actuator assembly except the packing gland follower.
- e. Eccentric plug valves shall be 100% ported.
- f. Eccentric plug valves and actuators shall meet or exceed the latest revisions of AWWA C517 and other applicable standards. Flanged ends shall be per ANSI B16.1 and mechanical joint ends per AWWA C111.

3. Check Valves

- a. General: Swing check valves for water, sewage, sludge, and general service shall be of the outside lever and spring or weight type, in accordance with AWWA C 508 - Swing-Check Valves for Waterworks Service, 2-in. through 24-in. NPS, unless otherwise indicated, with full-opening passages, designed for a water-working pressure of 150 psi. They shall have a flanged cover piece to provide access to the disc.

- b. Body: The valve body and cover shall be of cast iron conforming to ASTM A 126 - Gray Iron Castings for Valves, Flanges, and Pipe Fittings, with flanged ends conforming to ASME B 16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800, or mechanical joint ends, as indicated.
- c. Disc: The valve disc shall be of cast iron, ductile iron, or bronze conforming to ASTM B 584 - Copper Alloy Sand Castings for General Applications.
- d. Seat and Rings: The valve seat and rings shall be of bronze conforming to ASTM B 584 or B 148 - Aluminum-Bronze Castings, or of Buna-N.
- e. Hinge Pin: The hinge pin shall be of bronze or stainless steel.
- f. Shop coat finish shall comply with Section 09900 of these specifications.
- g. The valve shall be suitable for direct burial and shall have flanged or mechanical joint ends. Valves must be of domestic United States of America.
- h. Valves shall be manufactured by Mueller Company, LLC. of Tennessee. Other manufacturers shall be submitted and approved by Tammany Utilities prior to use.

4. Actuators

- a. Worm gear actuators shall be provided on all valves six inches and larger. Actuators shall be enclosed in a cast iron housing, with outboard seals to protect the bearings and other internal components. The actuator shaft and gear quadrant shall be supported on permanently lubricated bronze bearings.
- b. Buried actuators shall be 90% grease filled. Input shaft and fasteners shall be stainless steel. Actuator mounting brackets shall be totally enclosed.

B. Pressure Gauges

Each pressure gauge shall be direct mounted, cast aluminum case, with a 4-1/2" diameter dial and furnished with a clear glass crystal window, 1/4" shut-off valve, and a bronze pressure snubber. Provide diaphragm seals between shut-off valve and pressure gauge on all lines. All gauges shall be weatherproofed. The face dial shall be white finished aluminum with jet black graduations and figures. The face dial shall indicate the units of pressure being measured (e.g., feet, inches, etc.) or be dual scale.

C. Quick Connect Couplings

Quick connect couplings shall consist of bronze female adapter with female threads complete with plug by same manufacturer. Coupling components shall be as manufactured by Ever-Tite Coupling Company, Inc., New York, New York, OPW Seal Fast Adapter as manufactured by OPW (Dover Corporation) or approved equal.

D. Air Release Valves

- 1. Sewage air and vacuum release valve to be a design with a conical shape body, and

no contact between the fluid and sealing area. The valve body and spindle spring shall be a minimum 316 grade stainless steel, designed to facilitate disassembly for cleaning and maintenance. The float, valve seat and all working parts shall be of corrosion-resistant materials. Valves shall be equipped with the necessary attachments, including ball valve and cam-lock fitting to permit back flushing after installation without dismantling the valve.

2. The air release mechanism shall be a non-shock type by roll on seal that provides positive open and close operation with leak free sealing. The air and vacuum release valve working pressure range shall be 0 to 250 psi.
3. The air release shall be the following H- Tec or A.R.I. models or approved equal with size to be recommended by the manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the Engineer before they are installed.
- B. After installation, all valves and appurtenances shall be tested at least one (1) hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the Engineer.

3.02 SHOP PAINTING

Ferrous surfaces of valves and appurtenances shall be painted in accordance with Section 09900 unless specified elsewhere. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

3.03 INSPECTION AND TESTING

Completed pipe shall be subjected to hydrostatic pressure test for four (4) hours at full working pressure. All leaks shall be repaired and lines retested as approved by the Engineer.

END OF SECTION

SECTION 15250

FIRE HYDRANTS

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, installation, and testing of fire hydrant assemblies for various working pressures. Assemblies shall be installed at the locations as shown on the Drawings or as directed in the field by the Owner's Representative.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Standard Drawings.
- B. Shop Drawings and Submittals: Section 01340.
- C. Excavation and Backfilling: Section 02221.
- D. Cast-in-place Concrete: Section 03300.
- E. Miscellaneous Metals: Section 05500.
- F. Protective Coating: Section 09900.
- G. Water Mains: Section 02701.

1.03 SUBMITTALS

- A. Submit submittal packages in accordance with Standard Specification Section 01340.
- B. Submit manufacturer's catalog data, descriptive literature, and assembly drawings. Show dimensions, materials of construction by specification reference and grade, linings, and coatings.
- C. Submit manufacturer's certificate of compliance with AWWA C503 for fire hydrants designed for a working pressure of 150 psi.

PART 2 - MATERIALS

2.01 GENERAL

- A. Fire hydrants shall be dry barrel, post type design with three outlets conforming to AWWA C502 and NSF 61/372.

- B. Fittings and piping connecting the fire hydrant to the water main shall be constructed of ductile iron. Refer to Specification Section 02615 and the Standard Details.
- C. Resilient seated gate valve shall be installed between the fire hydrant and water main.
- D. A restrained, flange-by-flange connection shall be used to connect the fire hydrant to the gate valve.
- E. Thrust blocks shall be constructed of concrete conforming to Specification Section 03300, and backfill and bedding shall conform to Specification Section 02221.

2.02 FIRE HYDRANTS

- A. Components of the fire hydrants shall be constructed of materials.
 1. Bonnet, nozzle caps, barrels, traffic flange, drain ring housing, lower valve plate, cap nut and shoe (Flanged, 8" Mechanical Joint and Slip-On) shall be cast iron conforming to ASTM A-126, Grade B.
 - a. 4" and 6" Mechanical Joint Shoe shall be ductile iron conforming to ASTM A-536.
 - b. D-150 Mechanical Joint Shoe shall be ductile iron conforming to ASTM A-536.
 2. Operating nut, hold down nut, nozzles, upper valve plate, seat ring and drain ring shall be bronze, in compliance with AWWA Standard C502.
 3. Oil filler plug shall be brass conforming to ASTM B-16.
 4. O-ring seals shall be Buna N, ASTM D2000.
 5. Weather seal shall be EPDM, ASTM D2000.
 6. Anti-friction washer shall be a thermoplastic polymer with high resistance to dynamic and static wear.
 7. Bolts for bonnet, traffic flange, shoe and drain ring housing shall be steel, electrogalvanized meeting SAE J429 Grade 2 standards.
 8. Cap chains shall be steel, electrogalvanized.
 9. Upper and lower stems shall be steel conforming to ASTM A-576.
 10. Stem pin shall be stainless steel conforming to ASTM A-276 300 Series.
 11. Drain valve facing screws shall be stainless steel, ASTM A-276 300 Series.
 12. Nozzle lock shall be stainless steel, ASTM A-276 Type 410.
 13. O-rings for bonnet and barrel flanges shall be Buna N, ASTM D2000.
 14. O-ring for drain ring housing flange shall be Buna N, ASTM D2000.
 15. Gaskets for nozzle caps shall be neoprene, ASTM D2000.
 16. Stem coupling shall be stainless steel, ASTM A-890.
 17. Stem coupling clevis and cotter pins shall be stainless steel, ASTM A-276 300 Series.
 18. Drain valve facings shall be a resilient precision molded thermoplastic with unique sealing characteristics.
 19. Reversible main valve shall be an encapsulated molded rubber, ASTM D2000.
 20. Lower valve plate shall be cast iron, ASTM A-126 Class B coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
 21. Lock washer shall stainless steel, ASTM A-276 300 Series.
 22. Cap nut shall be cast iron ASTM A-126 Class B coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.

- 23. Cap nut seal -- Rubber, ASTM D2000.
- 24. Shoe coating -- Interior and exterior coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 25. Paint: Interior and exterior, above and below ground line surfaces shall be coated with high performance 2-part epoxy. Exterior above ground line shall be one coat UV resistant high gloss 2-part polyurethane enamel. Color shall be yellow chrome.

B. Fire hydrants shall have three outlets, two 2½ inch outlets and one 5 ½ inch outlet. Threads on outlets shall conform to NFPA No. 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections. Caps with retaining chains shall be provided for each outlet and shall be cast iron.

C. Fire hydrants shall have an integral check valve.

D. Fire hydrants shall conform to AWWA C502 and NSF61/372. Fire hydrants shall be Mueller Super Centurion 250 HS, or Owner approved equal.

2.03 RISERS

Riser shall be ductile iron pipe spools of the indicated length with flat faced flanged ends. Riser shall be Class 53 ductile iron pipe with Class 150 threaded flanges.

2.04 FIRE HYDRANT LEADS

Fire hydrant leads shall be 6" ductile iron pipe spools of the indicated length with flat faced flanged ends. Fire hydrant leads shall be Class 53 ductile iron pipe with Class 150 threaded flanges. Furnish and install pipe extensions with flat faced flanged ends and of the required length to adjust the hydrant to grade.

2.05 FLANGED CONNECTIONS

See Specification Sections 02515, 02615 or 02622 as indicated by the pipe material shown on the Drawings. Flanges shall be rated for working pressures of 250 psi or less (Class 150).

2.06 RESILIENT SEATED GATE VALVES

See Specification Section 15100 for gates valves. Six inch (6") resilient seated gate valves shall be installed on the fire hydrant lead between the water main and fire hydrant. Resilient seated gate valves shall have working pressures of 250 psi or less, and with valve ends as shown in the Standard Drawings.

2.07 BOLTS, NUTS AND GASKETS FOR RISERS AND BURY SECTIONS

Refer to Standard Specification Sections 02615 and 05500.

2.08 REFLECTIVE PAVEMENT MARKERS

Markers shall be of the reflective type and colored blue. Markers shall conform to the latest editions of Standard Plans and Specification from Louisiana Department of Transportation and Development.

PART 3 - EXECUTION

3.01 INSPECTION BEFORE INSTALLATION

Operate the valves on the fire hydrant from closed to fully open, then close again before installing. Check for broken, cracked, or missing parts; malfunctioning stems; and faulty operation.

3.02 INSTALLATION

- A. See Standard Specification Section 02221 for earthwork requirements. Use imported sand in the pipe base and pipe zone.
- B. Install piping and valves per the instructions contained in the appropriate Standard Specification for the material used.
- C. Piping from the main to the hydrant shall be placed level or on a continuous upward grade to avoid pocketing air.
- D. Clean threaded joints by wire brushing or swabbing. Apply Teflon joint compound or Teflon tape to pipe threads before installing screwed hydrants. Joints shall be watertight.
- E. Install flanged joints per the installation instructions in Standard Specification.

3.03 INSTALLING POLYETHYLENE ENCASEMENT

All buried bolts, nuts, ductile iron pipe, and fittings shall be wrapped polyethylene material. The polyethylene material shall be installed prior to placing concrete thrust blocks and concrete anchor blocks. Repair and replace polyethylene material damaged during construction.

3.04 INSTALLATION OF CONCRETE THRUST BLOCKS

Place concrete against the buried fittings and the undisturbed ground with the bearing area as shown on the Standard Details. Concrete shall set and be hard enough to be self-supporting. Place and compact trench backfill and compact up to the finished grade. Concrete shall conform to Specification Section 03300.

3.05 PAINTING AND COATING

Paint aboveground surfaces of the riser and hydrant cover per Specification Section 09900. Color of finish coat shall be Yellow Chrome.

3.06 INSTALLING FIRE HYDRANT MARKERS

Install a blue reflective marker opposite each fire hydrant. Place the marker on the pavement and locate 6 inches off the centerline of the traffic striping or reflective pavement markers towards the hydrant. Install markers in accordance with Louisiana Department of Transportation and Development Standard Plans and Specifications.

3.07 PRESSURE TESTING

Test fire hydrant assemblies at the same time that the connecting pipelines are pressure tested. Refer to Specification Section 02701 for pressure testing requirements. Repair leaks in the fire hydrant assemblies and joints of the interconnecting piping and retest.

3.08 DISINFECTION

See Standard Specification Section 02701 for chlorination requirements.

END OF SECTION

SECTION 15301

PROGRAMABLE AUTOMATIC FLUSHING SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, installation, and testing of programmable automatic flushing equipment. This equipment shall be used to automatically flush the desired amounts of water from water distribution systems for the purpose of improving and/or maintaining water quality. Programmable automatic flushing devices shall be installed at the locations as shown on the Drawings or as directed in the field by the Owner's Representative.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Standard Drawings.
- B. Shop Drawings and Submittals: Section 01340.
- C. Excavation and Backfilling: Section 02221.
- D. Water Mains: Section 02701.
- E. Miscellaneous Metals: Section 05500.
- F. Valves: Section 15010.

1.03 SUBMITTALS

- A. Submit submittal packages in accordance with Standard Specification Section 01340.
- B. Submit manufacturer's catalog data, descriptive literature, and assembly drawings. Show dimensions, materials of construction by specification reference and grade, linings, and coatings.
- C. Submit manufacturer's certificate of compliance with applicable AWWA requirements.

PART 2 - MATERIALS

2.01 GENERAL

- A. The automatic water distribution flushing equipment shall be comprised of the self-contained automatic flushing device with sampling quick connect, freeze protection, and integrated programming module powered a single 9-volt Alkaline battery.
 - 1. The equipment furnished under this Section shall be automatic water distribution flushing equipment designed to be permanently installed on water distribution lines.
 - 2. The primary purpose of this equipment shall be to automatically flush the desired amounts of water from water distribution systems for the purpose of improving and/or maintaining water quality.

- B. Fittings and piping connecting the automatic flushing device to the water main shall be lead-free brass fittings and polyethylene tubing, respectively. Refer to Specification Section 02701 and the Standard Details.
- C. Resilient seated gate valve shall be installed between the automatic flushing equipment and water main.

2.02 AUTOMATIC FLUSHING UNIT

- A. The automatic flushing device shall be a single device consisting of the major components described below:
 - 1. Control Valve
 - a. The valve shall be a Singer model 106-SC-BT-R, size 2", Female NPT Class 300 pressure rating / threaded, globe or angle body valve
 - b. Automatic purging assembly shall have a 2" threaded connection vertically or horizontally installed into a 2" Model 106-PG main valve body automatic solenoid control valve.
 - c. Automatic solenoid control valve shall have a 400-psi rating and be furnished with a standalone battery-operated controller.
 - d. The valve shall maintain a minimum pre-determined upstream pressure.
 - e. When the actual upstream pressure meets the minimum allowable pre-determined upstream pressure setting the valve will either close or modulate in order to maintain the minimum allowable upstream pressure.
 - f. The pilot shall be a normally closed Singer Model 81-RP Pressure Relief / Sustaining Pilot that remains closed when the upstream pressure is below the pilot setting.
 - g. When inlet supply pressure exceeds the pilot setting the 81-RP pilot opens to relieve the bonnet pressure which opens the main valve.
 - h. Each main valve must be equipped with an all brass water quality sampling port and brass quarter turn ball valve with stainless steel handle.
 - i. The main valve shall have the option to install a remote pressure monitoring unit via cellular based or direct SCADA connection.
 - j. The inlet connection(s) must consist of either NPT male, 150# flange or Cam Lock quick disconnect and have a main line isolation valve between the inlet and main valve.
 - k. The solenoid pilot shall be two-way normally closed: de-energized to close valve (normally open: de-energize to open valve) with 9-volt solenoid coil. The valve shall open and close fully in response to energizing and de-energizing of the solenoid pilot.
 - 2. Internal/Integral Piping within Flushing Unit
 - a. Device shall be certified by Underwriters Laboratories (UL) as meeting or exceeding the criteria of NSF-372.
 - b. The device's standard internal piping shall be stainless-steel.
 - c. The device's internal piping shall have an operational rating of 200. psi.
 - d. Internal piping shall be capable of being removed from the housing by means of a threaded coupling allowing for ease of disconnect, thus permitting easy maintenance and repairs.
 - e. The device shall be supplied with a standard 2-inch male NPT water supply connection.

3. Housing
 - a. The components shall be protected from the environment and vandalism by a HDPE or other non-corrosive, high quality polyethylene material.
 - b. The enclosure shall feature a below graded base with a minimum of a nine (9) inch bury depth. The below grade base must provide stability and anti-buoyancy capabilities.
 - c. The above ground housing must be vented.
 - d. The device's above-grade housing shall be constructed of a non-corrosive maintenance-free material and shall be permanently colored light green to blend with typical residential and commercial environments unless otherwise specified by the owner. The material shall be specifically designed for direct exposure to the sun and weather and have a minimum life expectancy of 15 years.
 - e. All mounting brackets and hardware shall be stainless-steel, anodized aluminum, or marine grade plastic.
 - f. The flushing system shall be equipped with freeze protection. The above- ground housing shall be insulated with a sheet insulation that has an R-rating of at least R-16. The insulation must be constructed of two 94%, or greater, reflective layers of film bonded to two internal layers of heavy gauge polyethylene bubbles offering a total thickness 5/16-Inch of protection.
 - g. The discharged water shall be directed downward, through a flow concentration nozzle, into a discharge catch pipe with a minimum diameter of six (6) inches.
 - h. The discharged water shall be directed to a storm sewer, storm swale, or other discharge point by pipe.
4. Backflow Prevention
 - a. To reduce the possibility of back siphonage, the device has been equipped with an Air Gap. The sizing of the Air Gap shall be in accordance with State Sanitary Code and AWWA requirements.
 - b. For added protection, the unit shall be equipped with reduce pressure zone (RPZ) valve.
 - i. The RPZ must be constructed of low-lead brass and must be testable.
 - ii. Factory installed RPZ valves shall be Wilkins-Zurn Reduce Pressure Zone.
 - iii. External RPZ valves shall be Watts Reduce Pressure Zone.
5. System Sampling - The sampling system shall include the following features:
 - a. The sampling system shall be constructed of polyethylene or greater resistance to bacterial regrowth and be connected with low-lead brass or stainless- steel fittings.
 - b. The. sampling system. shall be designed in such a way to reduce the potential for contamination of the sampling system by allowing access and inspection of the internal piping compartment and components without disassembly or depressurization of the sampling system.
 - c. The sampling system shall draw water for. water quality sampling· from the inlet side of the two-inch (2") adjustable control valve and be tapped into the service piping of the device no more than twenty-four inches (24") from the utility's service connection to the device. This positioning is essential in order to allow for a sample to be an accurate representation of the utility's water quality at the point of entry into the flushing device.
 - d. Connection to the device's sampling system shall be by means of a quick disconnect. The device's sampling connection shall be housed in a secure weather-tight area to minimize contamination of the sampling connection.

- e. The sampling connection shall be provided with a protective sanitary cover.
6. Controller/Programmer Module
- a. All programming shall be accomplished by means of an integrated programmer module that is powered by a single 9-volt Alkaline battery. The programmer modules shall have the following features:
 - i. Offer 24 flushing program events per day.
 - ii. Be leap-year compatible, automatically accounting for February 29th every four years.
 - iii. No onsite programming functions shall be possible without the utilization of a secured smart phone or tablet, thus providing an added level security against unauthorized program changes.
 - iv. Offer manual on and off functions.
 - v. Be secured and water-resistant.
 - b. The integrated programmer module shall be capable of permitting monthly flushing schedules to be altered by percentage if so desired by the Owner.
 - c. The controller module shall be managed by way of a secured app on a smart phone or tablet. The App shall be compatible with most current IOS or Android model cellular devices.
 - d. The App shall be capable of transmitting programming instructions by way of a wireless connection from smart phone or tablet to a corresponding antenna on the integrated programming module housed inside of the flushing device.
 - e. There shall be no initial or monthly fees to acquire and use the App.
- B. The automatic flushing equipment specified shall be Hydro-guard HG-2 or Hydro-guard 200 Series manufactured by Mueller or Owner approved equal. Contractor shall submit product specifications and shop drawing to the Owner and Engineer for review and approval prior to purchasing and installation of equipment.

2.03 SCADA COMPATIBILITY

The automatic flushing system shall be able to be readily integrated into the Owner's SCADA system. The automatic flushing system shall have following features:

- A. Real Time Alerts of pressure conditions via email or cellular telephone via SMS (Warning & Critical Condition Notification).
- B. Transient Pressure Monitoring
- C. Cellular base GSM (i.e., AT&T) and CDMA (i.e., Verizon).
- D. Downloadable data log for spreadsheets in Microsoft® Excel® or CSV format.
- E. Secure Web application for pressure reporting with expandability to monitor and manage other products (i.e., Hydro-Guard flushing and monitoring products).
- F. Customer Configurable low and high-pressure warning condition and alerts for each pressure monitoring device. Alerts allow end user and authorized designees to choose to receive emails or SMS alert messages when pre-set critical high or low conditions have been exceeded.
- G. Secure Web application for pressure reporting with expandability to monitor and manage other products (i.e., Hydro-Guard flushing and monitoring products).
- H. Multiple security levels for each customer: site administrator, technician and user.

- I. Authorized personnel have direct access to change monitoring criteria and review data.
- J. Interactive map overview of each pressure monitoring system Installation point.
- K. Pressure value readout and color-coded identification on the map, where red means critical, yellow means warning, green means normal.
- L. Weatherproof enclosure and over-molded connectors for in-ground application.

2.04 RESILIENT SEATED GATE VALVES

See Specification Section 15100 for gates valves. Resilient seated gate valves shall be installed on the two (2) inch service line between the water main and RPZ valve upstream of the automatic flushing unit. Resilient seated gate valves shall have working pressures of 250 psi or less, and with valve ends as shown in the Standard Drawings.

PART 3 - EXECUTION

3.01 INSPECTION BEFORE INSTALLATION

Operate the valves from closed to fully open, then close again before installing. Check for broken, cracked, or missing parts; malfunctions and faulty operation.

3.02 INSTALLATION

- A. Prior to the installation, the drainage patterns for the intended installation location shall be viewed to ensure that any discharged water will not create hazardous conditions for pedestrian or vehicular traffic. The selected location's drainage pattern shall also permit discharged water to flow away from the automatic flushing device or be absorbed by the surrounding soil as to prevent pooling.
- B. Remove debris that might create uneven pressure on the device from the bottom of the hole. Compact the bottom of the hole to minimize settling after installation.
- C. Install a four-inch (4") lift of non-compacted sand or similar bedding material into the bottom of the hole.
- D. Backfill the hole around the automatic flushing valve with clean fill, #57 stone and/or a combination of other appropriate materials. Backfilling shall be accomplished in 6" lifts. Use a level to ensure the device is level after each lift.
- E. The area thirty-six inches (36") around the automatic flushing valve shall be prepared in order to prevent erosion.

3.03 PRESSURE TESTING

Test flushing equipment at the same time that the connecting pipelines are pressure tested. Refer to Specification Section 02701 for pressure testing requirements. Repair leaks in the flushing unit and joints of the interconnecting piping and retest.

3.04 DISINFECTION

The automatic flushing valve shall be disinfected in accordance with State Sanitary Code and AWWA standards.

END OF SECTION

WATER MAIN NOTES

- NEW WATER MAINS INSTALLED USING AN OPEN CUT/TRENCH METHOD SHALL BE HDPE DR11. HDPE LINES SHALL HAVE FUSED FITTINGS UNLESS SPECIFICALLY NOTED OTHERWISE. HDPE PRICE FOR FITTINGS SHALL BE INCLUDED IN THE UNIT LINEAR FOOT PRICE. NEW WATER MAINS SHALL HAVE A BLUE STRIPE.
- TRACER WIRE AND IDENTIFICATION TAPE SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE WATER MAIN FOR ALL LINES IN ACCORDANCE WITH THE STANDARD DETAILS AND SPECIFICATIONS. THE TRACER WIRE AND IDENTIFICATION TAPE SHALL BE INSTALLED SIMULTANEOUSLY WITH THE WATER MAIN.
- NEW WATER MAINS INSTALLED USING HORIZONTAL DIRECTIONAL DRILLING (HDD) METHODS SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) PIPE CONFORMING TO AWWA C906, ASTM D3035 AND ASTM F714. NEW WATER MAINS BETWEEN 8" AND 48" DIAMETER SHALL HAVE A PRESSURE CLASS OF 200 PSI (DR11) AND CONFORM TO DUCTILE IRON PIPE SIZES (DIPS). CONNECTIONS BETWEEN PIPE LENGTHS SHALL BE FUSED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS. NEW HDPE WATER MAINS SHALL BE THE COLOR BLACK WITH A BLUE STRIPE. CONNECTIONS TO OTHER WATER MAINS, INCLUDING THOSE OF DIFFERENT MATERIAL, SHALL BE MADE USING THE APPROPRIATE ADAPTERS AND FITTINGS.
- UPON COMPLETION OF WATER MAIN CONSTRUCTION, THE DRILLING LOGS FOR ALL HDD INSTALLED WATER MAINS SHALL BE PROVIDED WITH THE RECORD DRAWINGS/AS-BUILT PLANS. THE DRILLING LOGS SHALL CONTAIN, AT A MINIMUM, THE SIZE OF THE WATER MAIN, THE DEPTH OF INSTALLATION, AND THE LENGTH OF THE SEGMENT.
- NEW WATER MAIN FITTINGS SHALL BE DUCTILE IRON FITTINGS (ONLY WHERE SPECIFICALLY SHOWN) CONFORMING TO AWWA C110/A21.10 WITH FITTING JOINTS CONFORMING TO AWWA C111/A21.11. THE DUCTILE IRON FITTING SHALL BE EPOXY COATED INSIDE AND OUT. BURIED FITTINGS SHALL BE MECHANICAL JOINT (MJ) FITTINGS. THE CONNECTION BETWEEN THE PVC FORCE MAIN AND THE FITTING SHALL BE RESTRAINED WITH A 2000PV OR 2000SV MEGA-LUG MECHANICAL JOINT THRUST RESTRAINT MANUFACTURED BY EBBA, INC. OR AN APPROVED EQUAL. THE NUTS AND BOLTS SHALL BE TEFLON COATED COR-TEN FASTENERS. ABOVE GROUND FITTINGS SHALL BE FLANGED, AND FASTENERS SHALL BE STAINLESS STEEL.
- THE CONTRACTOR SHALL INSTALL IDENTIFICATION TAPE ALONG THE ENTIRE LENGTH OF THE NEW WATER MAIN. IDENTIFICATION TAPE SHALL BE INSTALLED BY THE CONTRACTOR ONCE THE BACKFILL HAS BEEN PLACED AND COMPACTED TO AT LEAST 12" ABOVE THE TOP OF THE PIPE AND NOT MORE THAN 18" ABOVE THE CONNECTION.
- ALL NEW WATER MAINS SHALL UNDERGO HYDROSTATIC TESTING TO VERIFY LEAK TIGHTNESS. NEW WATER MAINS SHALL BE TESTED AT 125 PSI FOR 2 HOURS. THERE SHALL BE NO PRESSURE DROPS DURING THE TEST. IN THE EVENT THE WATER MAIN FAILS THE TEST, THE WATER MAIN PIPES SHALL BE CHECKED AND REPAIRED ACCORDINGLY. THE WATER MAIN SHALL BE RE-TESTED UNTIL IT PASSES.
- AFTER SUCCESSFUL PRESSURE TESTING, WATER LINES AND WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C-601. DISINFECTED LINES SHALL BE TESTED AND APPROVED BY THE LOUISIANA DEPARTMENT OF HEALTH BEFORE BEING PLACED INTO SERVICE. ALL LOUISIANA DEPARTMENT OF HEALTH TEST SAMPLES SHALL BE COLLECTED FROM AN INSTALLED KUPFERLE FOUNDRY COMPANY MODEL #88 SAMPLE STATION.

WATER FITTINGS AND VALVES NOTES

- WATER VALVES THREE INCHES (3") OR LARGER SHALL BE AWWA C-509 RESILIENT-SEATED GATE VALVE FOR POTABLE WATER SUPPLY SERVICE. WATER VALVES SHALL BE FUSION BONDED EPOXY AND LINED PER AWWA C-550. VALVES SHALL BE MUELLER SERIES 2360 OR DEPARTMENT OF UTILITIES APPROVED EQUAL. WATER VALVES SHALL BE RESTRAINED JOINT WITH MEGALUG AND TEFLON COATED CORE-TEN BOLTS AND NUTS.
- BURIED VALVES, INCLUDING TWO INCH (2") VALVES, SHALL HAVE A 3-PIECE CAST IRON BOX INSTALLED AND ADJUSTED TO FINISHED GRADE. BURIED VALVES SHALL HAVE AN AWWA OPERATING NUT AND A COVER LABELED "WATER". EACH VALVE BOX SHALL HAVE A PRECAST OR CAST-IN-PLACE PAD MEASURING AT LEAST 4" THICK BY 24" BY 24" SQUARE OR 4" THICK BY 24" ROUND.
- MANHOLE AND VALVE COVERS SHALL HAVE DIAMOND TREAD PATTERN AND HAVE THE WORD "WATER" CAST ON THE COVER.
- IN GENERAL, WATER MAINS AND VALVES SHALL BE LOCATED BETWEEN THE RIGHT-OF-WAY LINE AND TOP OF DITCH OR SUBSURFACE DRAINAGE FEATURE. A HORIZONTAL CLEARANCE A MINIMUM OF THREE FEET (3') SHALL BE MAINTAINED BETWEEN THE TOP OF DITCH (OR SUBSURFACE DRAINAGE FEATURE) AND EDGE OF THE MAIN AND/OR VALVE. IF THE CLEARANCE REQUIREMENT CANNOT BE MET DUE TO FIELD CONDITIONS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO DETERMINE AN ACCEPTABLE LOCATION OF THE MAIN AND/OR THE VALVE, ALL AT NO ADDITIONAL COST TO THE PROJECT. UNDER NO CIRCUMSTANCES SHALL VALVES AND THEIR ACCESS BE CONSTRUCTED IN DITCHES OR UNDER SUBSURFACE DRAINAGE FEATURES ARE ACCEPTABLE. ENGINEER'S DECISION SHALL BE FINAL.
- IN GENERAL, WATER MAINS AND VALVES SHALL BE AT LEAST THREE FEET (3') BELOW FINISHED GRADE BUT NO DEEPER THAN FIVE FEET (5') BELOW FINISHED GRADE. IF THE DEPTH OF THE WATER VALVE IS LESS THAN 3' OR GREATER THAN 5', THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO DETERMINE IF THE DEPTH OF THE WATER VALVE IS ACCEPTABLE. THE WATER VALVE SHALL BE MOVED AT NO ADDITIONAL COST TO THE PROJECT IN UNACCEPTABLE. ENGINEER'S DECISION SHALL BE FINAL.
- FITTINGS (FOR DUCTILE IRON PIPE ONLY) SHALL BE RESTRAINED JOINT DUCTILE IRON USING MEGALUGS AND TEFLON COATED CORE-TEN BOLTS AND NUTS. FITTINGS SHALL CONFORM TO ALL APPLICABLE AWWA/ANSI SPECIFICATIONS REGARDING USE IN POTABLE WATER SYSTEMS.
- BRASS FITTINGS SHALL BE LEAD FREE. BRASS FITTINGS SHALL BE MUELLER, FORD METER BOX COMPANY, OR DEPARTMENT OF UTILITIES APPROVED EQUAL. REFER TO SHEET C-503 FOR APPROVED MODELS FROM MUELLER AND FORD METER BOX COMPANY.
- CONNECTIONS TO EXISTING WATER LINES SHALL BE MADE USING MULLER STAINLESS STEEL TAPPING SLEEVE AND VALVE, MODEL NO. H-304SS. CONNECTION TO EXISTING WATER LINES USING OTHER TAPPING SLEEVES AND VALVES OTHER THAN MUELLER H-304SS SHALL BE APPROVED BY DEPARTMENT OF UTILITIES PRIOR TO USE.
- WATER SERVICE CONNECTIONS SHALL HAVE A BRASS TAPPING SADDLE, BRASS CORPORATION STOP, AND A MINIMUM 1" CONNECTION SIZE. SERVICE CONNECTION PIPING SHALL BE AWWA C901 POLYETHYLENE TUBING, PE3408 DR9. WATER SERVICE CONNECTION SHALL HAVE MINIMUM COVER OF 2'. A U-BRANCH SHALL BE INSTALLED ON WATER SERVICE CONNECTION WHIP. THE LOCATION OF THE WATER SERVICE CONNECTIONS SHALL BE STAMPED IN THE CURB FACE OR ROAD SURFACE USING THE "W" SYMBOL, AND THE LETTERING SHALL BE AT LEAST 4" BY 8".
- ALL WATER SERVICE CONNECTIONS SHALL BE LOCATED AT THE LOT LINE. WATER SERVICE CONNECTIONS SHALL NOT BE LOCATED WITHIN THE DRIVEWAY.
- ONE SAMPLE STATION SHALL BE INSTALLED BETWEEN VALVES ON THE WATER MAIN OR BETWEEN A VALVE AND DEAD-END OR CUL-DE-SAC.
- ALL NEW SAMPLE STATIONS SHALL BE KUPFERLE FOUNDRY COMPANY BRAND - MODEL # 88-SS.

FIRE HYDRANT NOTES

- FIRE HYDRANTS SHALL BE MUELLER HIGH SECURITY FIRE HYDRANT (SUPER CENTURION 250 HS) WITH BUILT-IN CHECK VALVE AND SHALL COMPLY WITH AWWA C-502/OR C-503. OTHER MODEL FIRE HYDRANTS SHALL BE SUBMITTED FOR APPROVAL BY DEPARTMENT OF UTILITIES PRIOR TO PURCHASING AND INSTALLING. FIRE HYDRANTS SHALL HAVE AT LEAST THREE OUTLETS, AND ALL OUTLETS SHALL HAVE NATIONAL STANDARD THREADS. ONE OUTLET SHALL BE A 5½ INCH PUMPER CONNECTION, AND TWO OUTLETS SHALL BE 2½ INCH HOSE CONNECTIONS. FIRE HYDRANTS SHALL BE PAINTED CHROME YELLOW.
- ALL FIRE HYDRANTS SHALL HAVE A MINIMUM OF 24 INCHES OF CLEARANCE BETWEEN FINISHED GRADE AND THE BOTTOM OF THE 2½ INCH OUTLET. IF THE FIRE HYDRANT BECOMES BURIED OR THE CLEARANCE IS LESS THAN THE REQUIRED 24", THE CONTRACTOR SHALL RAISE THE FIRE HYDRANT TO ACHIEVE THE MINIMUM REQUIRED CLEARANCE. DEPARTMENT OF UTILITIES SHALL NOT ACCEPT THE DEVELOPMENT UNTIL ALL FIRE HYDRANTS HAVE THE REQUIRED GROUND CLEARANCE.
- FIRE HYDRANTS SHALL HAVE A 6" DIAMETER DUCTILE IRON LEAD WITH 6" MUELLER GATE VALVE FOR ISOLATION FROM THE WATER MAIN.
- THE LOCATION OF EACH FIRE HYDRANT SHALL BE MARKED WITH A BLUE REFLECTOR ON THE ROADWAY PAVEMENT. BLUE REFLECTOR SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE CLOSEST TO THE FIRE HYDRANT (NO DIRECT PAY ITEM).
- FIRE HYDRANTS SHALL BE LOCATED AT LEAST SIX FEET, OR GREATER AS NECESSARY BY REGULATORY REQUIREMENT, FROM THE EDGE OF ROADWAY PAVEMENT.
- THE MAXIMUM SPACING BETWEEN FIRE HYDRANTS SHALL BE 500 FEET.
- A MINIMUM OF THREE FIRE HYDRANTS IN THE DEVELOPMENT SHALL BE TESTED BY THE CONTRACTOR TO VERIFY ACTUAL FIRE FLOW AND TO CLASSIFY THE FIRE HYDRANTS BY OBSERVED FLOW RATES. THE NUMBER AND SELECTION OF HYDRANTS FOR TESTING SHALL BE DETERMINED BY THE LOCAL FIRE PROTECTION DISTRICT. REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES AND OF THE LOCAL FIRE PROTECTION DISTRICT SHALL BE PRESENT TO OBSERVE FIRE FLOW TESTING AND RESULTS (NO DIRECT PAY ITEM).
- AFTER FIRE FLOW TESTING, THE DEVELOPER AND/OR THE CONTRACTOR SHALL PAINT THE TOP AND THE THREE OUTLET CAPS OF EACH FIRE HYDRANT IN ACCORDANCE WITH THE NFPA COLOR CODING SYSTEM TO CLASSIFY EACH HYDRANT BY FIRE FLOW (NO DIRECT PAY ITEM).
 - RED: TO BE USED ON ALL FIRE HYDRANTS WITH FIRE FLOW LESS THAN 500 GALLONS PER MINUTE
 - ORANGE: TO BE USED ON ALL FIRE HYDRANTS WITH FIRE FLOW BETWEEN 500 AND 1,000 GALLONS PER MINUTE
 - GREEN: TO BE USED ON ALL FIRE HYDRANTS WITH FIRE FLOW BETWEEN 1,000 AND 1,500 GALLONS PER MINUTE
 - BLUE: TO BE USED ON ALL FIRE HYDRANTS WITH FIRE FLOW GREATER THAN 1,500 GALLONS PER MINUTE
- WHERE HYDRANTS ARE NOT IN PAVEMENT PROVIDE 4 FOOT BY 4 FOOT BY 6 INCH SLAB WITH 6x6 WWF (TO BE INCLUDED IN UNIT PRICE).

REFER TO SHEET G-101 FOR ADDITIONAL WATER STANDARD NOTES

GENERAL LINETYPES AND SYMBOLS	
SYMBOL	MEANING
— w — w —	EXISTING WATER MAIN
— W —	NEW WATER MAIN
— WC — WC —	NEW WATER SERVICE LINE
⊗	EXISTING WATER VALVE
⊗	NEW WATER VALVE
⊕	EXISTING FIRE HYDRANT
⊕	NEW FIRE HYDRANT
⊕	NEW FLUSH VALVE
⊕	NEW WATER METER
⊕	NEW WATER SAMPLE TAP
△	EXISTING GAS METER, VALVE OR SIGN
⊕	EXISTING POWER POLE
⊕	EXISTING TELEPHONE RISER
⊕	EXISTING CATCH BASIN
⊕	EXISTING ATT VAULT
⊕	EXISTING CABLE RISER
⊕	TOP OF DITCH
---	EXISTING CULVERT
⊕	TREE
— x —	EXISTING FENCE
---	RIGHT-OF-WAY, PROPERTY LINE
---	REQUIRED SERVITUDE



DEPT. OF UTILITIES
ST. TAMMANY PARISH
GOVERNMENT
620 N. TYLER STREET
COVINGTON, LA 70433

DATE:	DESCRIPTION OF REVISION
No.	

DESIGNED BY: TAA	CHECKED BY: GfJ	PROJECT No.:	ISSUE DATE:	APPROVED BY: KAG	SHEET SIZE:	SCALE:
DRAWN BY: DAC	SUBMITTED BY: TAA	TU22000203	8/2024	ANSI D	NIS	
		TU22000205				



LAZY WHEELS AND SOUTHERN
MANOR WATER DISTRIBUTION
SLIDELL, LOUISIANA
PROJECT Nos.: TU22000203
& TU22000205
WATER STANDARD NOTES (2 OF 2)

SHEET NO.
G-102
SHEET 4 OF 19

G:\11674_05 ISSUED FOR BID\05_C-001 SITE PLAN.dwg [C-001] Aug 06, 2024 - 11:26am by tammy



UTILITY WARNING (APPLIES TO ALL SHEETS)
 The Contractor is advised that existing overhead and underground utilities such as (but not limited to) electrical lines and poles, telephone cable, gas lines, water lines, and sanitary sewers exist in the rights-of-way where the proposed improvements are to be installed, all in accordance with the provisions of R.S. 38:2223. It shall be the Contractor's responsibility to protect these existing utilities during the construction of the work to be installed under this Contract and any damage to the existing utilities caused by the negligent acts of the Contractor shall be repaired by the Contractor at his expense. The Contractor shall contact Louisiana One (1) Call (1-800-272-3020) a minimum of 48 hours prior to beginning construction in the work area.



DEPT. OF UTILITIES
 ST. TAMMANY PARISH
 GOVERNMENT
 620 N. TYLER STREET
 COVINGTON, LA 70433

No.	DESCRIPTION OF REVISION	DATE:

DESIGNED BY:	TAA
DRAWN BY:	GFJ
CHECKED BY:	DAC
SUBMITTED BY:	TAA
PROJECT No.:	TU22000203
PROJECT No.:	TU22000205
ISSUE DATE:	8/2024
APPROVED BY:	KAG
SHEET SIZE:	ANSI D
SCALE:	1"=400'



LAZY WHEELS AND SOUTHERN
 MANOR WATER DISTRIBUTION
 SLIDELL, LOUISIANA
 PROJECT Nos.: TU22000203
 & TU22000205

SITE PLAN

SHEET NO.
C-001
 SHEET 5 OF 19

MATCH LINE SEE SHEET NO. C-205



ADDITIVE ALTERNATE NO. 1
75 L.F. OF NEW 10" HDPE,
DR 11 WATER MAIN (OPEN CUT)

ADDITIVE ALTERNATE No. 1
REMOVE BLIND FLANGE
AND CONNECT TO
EXISTING 10" GATE VALVE

PROJECT NO.
TU22000205
(THIS CONTRACT)

PROJECT NO.
TU22000206
TU22000207
TU22000208
(BY OTHERS)

BROWNSWITCH RD.

AUDUBON ST.

LOWERLINE ST.



DEPT. OF UTILITIES
ST. TAMMANY PARISH
GOVERNMENT
620 N. TYLER STREET
COVINGTON, LA 70433

No.	DESCRIPTION OF REVISION	DATE:

DESIGNED BY:	TAA
DRAWN BY:	CFJ
CHECKED BY:	DAC
SUBMITTED BY:	TAA
PROJECT No.:	TU22000203
ISSUE DATE:	TU22000205
APPROVED BY:	KAG
SHEET SIZE:	ANSI D
SCALE:	1" = 20'



LAZY WHEELS AND SOUTHERN
MANOR WATER DISTRIBUTION
SLIDELL, LOUISIANA
PROJECT Nos.: TU22000203
& TU22000205

SOUTHERN MANOR - PLAN

SHEET NO.
C-206
SHEET 11 of 19

