



Spangler Engineering, LLC

CONSULTING CIVIL ENGINEERS

T. C. Spangler, Jr., P.E.
Jay C. Pittman, P.E.
Mitchell D. Roniger, P.E.

Specifications and Contract Documents

for

HAEIDD Lift Station & Force Main Improvements [FY2024]

for the

City of Hammond, Louisiana

Pete Panepinto, MAYOR

City Council

Kip Andrews
Carlee White-Gonzales
Sam DiVittorio
Steve Leon
Devon Wells

214 Southwest Railroad Avenue
Post Office Box 1374
Hammond, Louisiana 70404
(985) 542-8665

March 21, 2024

Set No. _____

**SPECIFICATIONS
AND
CONTRACT DOCUMENTS**

for

HAEIDD Lift Station & Force Main Improvements [FY2024]

for the

City of Hammond, Louisiana

PETE PANEPINTO, Mayor

Council

Kip Andrews
Carlee White Gonzales
Sam DiVittorio
Steve Leon
Devon Wells

Prepared by:

Spangler Engineering, LLC

CONSULTING CIVIL ENGINEERS
POST OFFICE BOX 1374
214 SOUTHWEST RAILROAD AVENUE
HAMMOND, LOUISIANA 70404
(985) 542-8665

March 21, 2024



21 MARCH 24

TABLE OF CONTENTS

ADVERTISEMENT FOR BIDS	EJCDC C-111: page 1
INFORMATION FOR BIDDERS	00100-1 – 00100-3
INSTRUCTIONS to BIDDERS	EJCDC C-200: pages 1 – 9
BID FORM – HAEIDD Lift Station & Force Main Improvements [FY2024]	00400-1 – 00400-3
BID BOND	EJCDC C-430: pages 1 – 2
Attestation Clause Required by LA R.S. 38:2227	0440-1
Affidavit Pursuant to LA R.S. 38:2212.10	0440-2
Non-Collusion Affidavit	0440-3
NOTICE OF AWARD	EJCDC C-510: page 1
AGREEMENT BETWEEN OWNER AND CONTRACTOR	EJCDC C-520: pages 1 – 7
PERFORMANCE BOND	EJCDC C-610: pages 1 – 3
PAYMENT BOND	EJCDC C-615: pages 1 – 3
NOTICE TO PROCEED	EJCDC C-550: page 1
GENERAL CONDITIONS (EJCDC C-700)	EJCDC C-700: pages 1 – 60
SUPPLEMENTARY CONDITIONS (EJCDC C-800)	EJCDC C-800: pages 1 – 30
CONTRACTOR's Application for Payment (Substitute for EJCDC C-620)	Page 1
CERTIFICATE OF SUBSTANTIAL COMPLETION	EJCDC C-625

TECHNICAL SPECIFICATIONS

General Construction	T-1
Miscellaneous Clearing, Sitework & Erosion Control	T-11
Mobilization	T-13
Excavation & Embankment – Hauled-in Backfill	T-14
Limestone	T-16
PC Concrete	T-18
Sanitary Sewer Lift Station – HAEIDD (LS#51)	T-22
Excavation, Trenching, & Backfilling for Utilities	T-29
Maintenance of Existing Wastewater Service	T-37
Yard Piping – Valves – Gates	T-38
Force Main Piping	T-47
Polyethylene Piping	T-53
Jack & Boring – Directional Boring	T-55

APPENDIX

Miscellaneous Quantity Summaries (Boring Operations)
LDH Permit (Applied for)
LADOTD Utility Permit
Tangipahoa Parish Government Utility Permit

CONSTRUCTION PLANS for

**“HAEIDD Lift Station & Force Main Improvements [FY2024]”
for the City of Hammond**

prepared by Spangler Engineering, LLC, Consulting Civil Engineers dated March 21, 2024

Owner: **City of Hammond, LA**

Project: **HAEIDD Lift Station & Force Main Improvements [FY2024]**

ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of "**HAEIDD Lift Station & Force Main Improvements [FY2024]** for **City of Hammond**" will be received by the Mayor & City Council of the City of Hammond at the City Hall Annex, 312 East Charles Street; Hammond, LA 70401, until **10:00 a.m. (CDT) Thursday, April 18, 2024**, at which time the Bids received will be publicly opened and read. The Project consists of:

Improvements to the HAEIDD lift station (LS#51) and force main through installation of new duplex submersible pumping equipment (800 GPM @ 60' TDH)(dry pit application), installation of a new twelve-inch inner diameter (12" I.D.) force main (PE/PVC) (18,300 LF), installation of air release valves, haul-in, grade, compact backfill and limestone, installation of new electrical controls, installation of force main bypass assembly, including but not limited to, yard piping, clearing & grubbing, and other tasks as shown on the drawings, indicated on the Bid Form, or reasonably implied.

Budget: \$1,925,000.00

Contract term: 150 calendar days

Bids will be received for a single prime Contract. Bids shall be on a unit price basis as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is:

Spangler Engineering, LLC; 214 Southwest Railroad Avenue; Hammond, LA 70403; (985) 542-8665; Jay C. Pittman, P.E.; jay@spanglerengineering.com. Prospective Bidders may examine the Bidding Documents at the Issuing Office between the hours of 8:00 am – 4:00 pm (Monday-Thursday), and 8:00 am – 12 noon (Friday), and shall obtain copies of the Bidding Documents from the Issuing Office as described herein.

Bidding Documents may also be examined at the Office of the Mayor, City of Hammond; 310 East Charles Street; Hammond, LA 70401.

Printed copies of the Bidding Documents shall be obtained from the Issuing Office (prime bidders) during the hours indicated above upon payment of a deposit of \$200.00 for each set. Bidders who return full sets of the Bidding Documents in good condition (suitable for re-use) within ten (10) days after receipt of Bids (April 28, 2024) will receive a full refund (\$200.00). Non-Bidders, and Bidders who obtain more than one set of the Bidding Documents, will receive a refund of \$50.00 for documents returned in good condition within the time limit indicated above. Checks for Bidding Documents shall be payable to "Spangler Engineering, LLC". Upon request and receipt of the document deposit indicated above the Issuing Office will transmit the Bidding Documents via delivery service. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

A pre-bid conference will be held at 10:00 am on Thursday, April 11, 2024, at the Office of the Engineer; 214 Southwest Railroad Avenue; Hammond, LA 70403. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Bid security shall be furnished in accordance with the Instructions to Bidders.

Owner: City of Hammond, LA

By: 

Title: Pete Panepinto, MAYOR

Date: March 21, 2024

+ + END OF ADVERTISEMENT FOR BIDS + +

INFORMATION FOR BIDDERS

BIDS will be received by the City of Hammond, Louisiana (herein called the "OWNER"), at the Council Conference Room, City Hall Annex, 312 East Charles Street, Hammond, Louisiana, until

10:00 a.m. (CDT), Thursday, April 18, 2024

and then at said office publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to "City of Hammond" at Post Office Box 2788; Hammond, LA 70404. Each sealed envelope containing a BID must be plainly marked on the outside as

"BID for HAEIDD Lift Station & Force Main Improvements [FY2024]"

and the envelope should bear on the outside the BIDDER'S name, address, and license number if applicable, and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at Post Office Box 2788; Hammond, LA 70404.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within FORTY-FIVE (45) calendar days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site(s) and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve the contractor from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the OWNER for five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND each in the amount of one-hundred percent (100%) of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the Property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER. The foregoing is subject to delays based on USDA Rural Development review and approvals.

The NOTICE TO PROCEED shall be issued within thirty (30) calendar days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER AND CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the thirty (30) calendar day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsible BIDDER provided the Owner has available sufficient funds.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its BID.

Further, the BIDDER agrees to abide by the requirements under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in the SUPPLEMENTAL GENERAL CONDITIONS.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

The Pre-Bid Conference will commence at 10:00 a.m., Thursday, April 11, 2024, at the office of the Engineer (214 Southwest Railroad Avenue; Hammond, LA 70403).

The ENGINEER is **Jay C. Pittman, P.E., Spangler Engineering, LLC.**

The ENGINEER'S address is 214 Southwest Railroad Avenue, P. O. Box 1374, Hammond, LA 70404.

The ENGINEER's cell number is (985) 320-7224.

The ENGINEER's FAX number is (985) 542-0046.

The ENGINEER's e-mail address is jay@spanglerengineering.com.

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

	Page
Article 1 – Defined Terms.....	1
Article 2 – Copies of Bidding Documents.....	1
Article 3 – Qualifications of Bidders.....	1
Article 4 – Site and Other Areas; Existing Site Conditions; Examination of Site; Owner’s Safety Program; Other Work at the Site.....	1
Article 5 – Bidder’s Representations.....	3
Article 6 – Pre-Bid Conference.....	4
Article 7 – Interpretations and Addenda.....	4
Article 8 – Bid Security.....	4
Article 9 – Contract Times.....	5
Article 10 – Liquidated Damages.....	5
Article 11 – Substitute and “Or-Equal” Items.....	5
Article 12 – Subcontractors, Suppliers, and Others.....	6
Article 13 – Preparation of Bid.....	6
Article 14 – Basis of Bid.....	7
Article 15 – Submittal of Bid.....	7
Article 16 – Modification and Withdrawal of Bid.....	8
Article 17 – Opening of Bids.....	8
Article 18 – Bids to Remain Subject to Acceptance.....	8
Article 19 – Evaluation of Bids and Award of Contract.....	8
Article 20 – Bonds and Insurance.....	9
Article 21 – Signing of Agreement.....	9
Article 22 – Sales and Use Taxes.....	9
Article 23 – Contracts to Be Assigned.....	9
Article 24 – Wage Requirements.....	9

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued, namely **Spangler Engineering, LLC, 214 Southwest Railroad Avenue; Hammond, LA 70403.**

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents **if desired for use by a prime bidder, shall** be obtained from the Issuing Office in the number and format stated in the advertisement to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.
- A. **A bid shall be considered "non-responsive" if it is submitted by a party which failed to obtain a serialized set of Bidding Documents from the Issuing Office.**

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 4.01 *Site and Other Areas*
- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.
- 4.02 *Existing Site Conditions*
- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is

entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
1. **Data relative to existing underground facilities has been solicited by the Engineer in accordance with LA RS 40:1749.11 et seq, and shown schematically on the drawings. Should additional or conflicting data be marked in the field as a result of the Contractor's "Louisiana One Call", the Contractor shall notify the Engineer in order to mitigate all conflicts.**
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;

- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

- 6.01 A pre-Bid conference will be held at the time and location stated in the advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing **not less than seven (7) calendar days prior to the opening of bids**. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **five percent (5%)** of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within **ten (10) days** after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which the Work is to be substantially completed is **ONE HUNDRED FIFTY (150) calendar days** as counted with the initial day being the commence work date as identified in the Notice to Proceed. The number of days within which the Work is to be completed, **including satisfactory correction of itemized punch list work**, and ready for final payment, is **one-hundred ninety-five (195) calendar days**, as set forth in the Agreement.
- 9.02 The Contract time may be amended or extended from time to time as necessary to account for inclement weather, delays in delivery of equipment and supplies, and other factors which, in the judgment of the Engineer, constitute delays beyond the reasonable control of the Bidder.
- 9.03 Delays due to fixture and/or materials shipments shall be fully documented and information provided to the Engineer prior to permitting such delay to be considered as justifiable.
- 9.04 A delay due to inclement weather will be determined by the judgment of the Engineer. If, in the opinion of the Engineer, 60% of the work force can work for a period of six working hours or greater, a delay day will not be granted.
- 9.05 If the Contractor fails to complete the WORK within the specified period, he will be subject to liquidated damages for each day thereafter until work is complete to the satisfaction of the Engineer

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Liquidated damages for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment shall be **One thousand dollars (\$1,000.00) per calendar day**, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01 **The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least ten (10) calendar days prior to the date for receipt of Bids in the case of a proposed substitute and ten (10) calendar days prior in the case of a proposed “or-equal.” Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. Substitutes and “or-equal” materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.**
- 11.02 **All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.**
- 11.03 **If an award is made, Contractor shall be allowed to submit proposed substitutes and “or-equals” in accordance with the General Conditions.**

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 **If required by the bid documents, the** apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for portions of the Work under this contract.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

12.04 **The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.**

ARTICLE 13 – PREPARATION OF BID

13.01 The Louisiana Public Work Bid Form is included with the Bidding Documents.

A. All blanks on the Louisiana Public Work Bid Form shall be completed in ink and the Louisiana Public Work Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.

B. A Unit Price shall be indicated for each Bid item in numerals.

C. A Unit Price Extension shall be indicated for each Bid item, which extension shall be equal to the number of units multiplied by the unit price.

D. A Bid Total shall be indicated on the Bid Form representing the sum of all unit price extensions.

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership's address for receiving notices shall be shown.

13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm's address for receiving notices shall be shown.

- 13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Louisiana Public Work Bid Form. The joint venture's address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Louisiana Public Work Bid Form, **unless the last Addendum issued is accompanied by a revised Bid Form and that Addendum allows or requires acknowledgment of all Addenda to be satisfied by use of the revised Bid Form for submission of the Bid.**
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Louisiana Public Work Bid Form.

ARTICLE 14 – BASIS OF BID

14.01 *Lump Sum*

A. ~~Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.~~

14.02 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "**Unit Price Extension**" (sometimes referred to as the extended price) for each unit price Bid item shall be the product of the "**Quantity**" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "**Unit Price**" offered by the Bidder. The total of all unit price Bid items shall be the sum of these "**Unit Price Extensions**"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder, **if so requested, may be furnished** one separate unbound copy of the Bid Form-~~Form~~.
- 15.02 The unbound copy of the Bid Form shall be completed, **signed** and submitted with the Bid security and **Power of Attorney (in the case of surety Bid Bond), on or before the deadline for submission of the Bid.**
- 15.03 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope

containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to **City of Hammond; Post Office Box 2788; Hammond, LA 70404.**

- 15.04 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the advertisement to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time ~~stated in the Bid Form~~ **for forty-five (45) calendar days**, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period. **The Owner and Low Responsive Bidder may by mutual agreement extend this period of time in thirty (30) calendar day increments as needed.**

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.

19.03 Evaluation of Bids

- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within fifteen (15) days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES

~~22.01 Owner is exempt from [] state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. []). Said taxes shall not be included in the Bid. Refer to Paragraph SC 7.09 of the Supplementary Conditions for additional information.~~

ARTICLE 23 – CONTRACTS TO BE ASSIGNED

ARTICLE 24 – WAGE REQUIREMENTS

24.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: City of Hammond, LA
Tangipahoa Parish
312 E. Charles Street
Hammond, LA 70401

BID FOR: HAEIDD Lift Station & Force Main
Improvements [FY2024]

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: Spangler Engineering, LLC and dated: March 21, 2024

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:**

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 BASE BID items "1." through "16.":

(1) _____ Dollars (\$ _____)

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

Alternate No. 1 (*Owner to provide description of alternate and state whether add or deduct*) for the lump sum of:

Not applicable Dollars (\$ _____)

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

Not applicable Dollars (\$ _____)

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

Not applicable Dollars (\$ _____)

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 RS 38:2218(A) is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: City of Hammond, LA BID FOR: HAEIDD Lift Station & Force Main
Tangipahoa Parish Improvements [FY2024]
312 E. Charles Street
Hammond, LA 70401

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

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Mobilization	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
1.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Miscellaneous Clearing & Sitework – Construction/Traffic Signage	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
2.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install/Maintain SWPPP/Erosion Control	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
3.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Haul-in/grade/compact BACKFILL (vehicular measure)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
4.	100	CUBIC YARDS		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Haul-in/grade/compact LIMESTONE (610/#57 - vehicular measure)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
5.	100.0	TONS		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install Flowable Fill (vehicular measure)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
6.	20	CUBIC YARDS		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install/Open Cut 12" I.D. Force Main (PE/PVC)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
7.	18,300	LINEAR FEET		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Directional Bore (Operation Only) - Ponchatoula Creek Crossing	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:		
8.	600	LINEAR FEET		

Wording for "DESCRIPTION" is to be provided by the Owner.
 All quantities are estimated. The contractor will be paid based on actual quantities as verified by the Owner

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM – continued

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

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Directional Bore (Operation Only) – Project Wide	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
9.	5,325	LINEAR FEET		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install Combination Air Valves	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
10.	8	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install Duplex Submersible Pumping Equipment – HAEIDD (LS#51) (800 GPM @ 60'TDH)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
11.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Yard Piping (LS#51)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
12.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Install Force Main Bypass Assembly (LS#51)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
13.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Maintenance of Sewer – Bypass Pumping (LS#51)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
14.	1	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Tie-in Exst./New SS to Exist./New SS	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
15.	4	EACH		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid	Electrical Work/Controls (LS#51)	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
16.	1	EACH		
Total BASE BID [sum of extension of items "1." – "16." above (1):				\$

[in numerals]

(1) *Should agree with line "(1)" page 0400-1*

Wordings for "DESCRIPTION" is to be provided by the Owner.
 All quantities are estimated. The contractor will be paid based on actual quantities as verified by the Owner

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name, and Address of Principal Place of Business):

OWNER (Name and Address):

City of Hammond

Post Office Box 2788

Hammond, LA 70404

BID

Bid Due Date: _____

Description (Project Name— Include Location):

HAEIDD Lift Station & Force Main Improvements [FY2024] – City of Hammond

BOND

Bond Number: _____

Date: _____

Penal sum _____ \$ _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

(Seal)

Bidder's Name and Corporate Seal

SURETY

(Seal)

Surety's Name and Corporate Seal

By:

Signature

Print Name

Title

By:

Signature (Attach Power of Attorney)

Print Name

Title

Attest:

Signature

Title

Attest:

Signature

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

HAEIDD Lift Station & Force Main Improvements [FY2024]

Name of Project

City of Hammond

Name of Grantee/Owner

Date of Bid

**ATTESTATION CLAUSE REQUIRED BY
LA. R.S. 38:2227 (PAST CRIMINAL CONVICTIONS OF BIDDERS)**

As a Bidder on the above-entitled Public Works Project, does hereby attest that:

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

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

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

- (a) Theft (R.S. 14:67)
- (b) Identity Theft (R.S. 14:67.16)
- (c) Theft of a business record (R.S.14:67.20)
- (d) False accounting (R.S. 14:70)
- (e) Issuing worthless checks (R.S. 14:71)
- (f) Bank fraud (R.S. 14:71.1)
- (g) Forgery (R.S. 14:72)
- (h) Contractors; misapplication of payments (R.S. 14:202)
- (i) Malfeasance in office (R.S. 14:134)

NAME OF BIDDER

NAME OF AUTHORIZED SIGNATORY OF BIDDER

DATE

TITLE OF AUTHORIZED SIGNATORY OF BIDDER

**SIGNATURE OF AUTHORIZED
SIGNATORY OF BIDDER**

AFFIDAVIT PURSUANT TO LA. 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 the City of Hammond, Tangipahoa Parish, Louisiana, 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.

Signature: _____

Printed Name: _____

Title: _____

Name of Entity: _____

THUS SWORN TO AND SUBSCRIBED BEFORE ME,

THIS _____ DAY OF _____, 2024.

NOTARY PUBLIC

NON-COLLUSION AFFIDAVIT

STATE OF LOUISIANA

[to be executed &
submitted w/Agreement]

PARISH OF TANGIPAHOA

BEFORE ME, the undersigned notary, duly commissioned and qualified in and for the Parish and State aforesaid, personally came and appeared:

hereinafter referred to as "Affiant", who, after first being duly sworn, deposed and attested as follows:

Affiant has rendered the services of **General Construction Contractor** in connection with the construction of

HAEIDD Lift Station & Force Main Improvements [FY2024]

for the City of Hammond, Louisiana.

for which services Affiant has contracted for value: \$ XXX,XXX.XX

Affiant employed no person, corporation, firm, association, or other organization either directly or indirectly, to secure the public contract under which he received the abovesaid payment, other than persons regularly employed by the Affiant, whose services in connection with the construction of the project were in the regular course of their duties for Affiant: and,

No part of the contract price received by the 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 of the project were in the regular course of their duties for Affiant.

SIGNATURE OF AFFIANT: _____

NAME: _____

TITLE: _____

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 2024,
in the City of _____.

NOTARY PUBLIC _____

Signature and Seal

NAME: _____

ADDRESS: _____

NOTICE OF AWARD

Date of Issuance: _____
Owner: City of Hammond, LA Owner's Contract No.: _____
Engineer: Spangler Engineering, LLC Engineer's Project No.: _____
Project: HAEIDD Lift Station & Force Main Impr. [FY2024] Contract Name: _____
Bidder: _____
Bidder's Address: _____

TO BIDDER:

You are notified that Owner has accepted your Bid dated _____ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

HAEIDD Lift Station & Force Main Improvements [FY2024].

The Contract Price of the awarded Contract is: \$ XXX,XXX.XX subject to unit prices.

Four (4) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 10 days of the date of this Notice of Award:

1. Deliver to Owner four (4) counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [e.g., performance and payment bonds] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): None

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: City of Hammond

Authorized Signature
By: Pete Panepinto
Title: Mayor

Copy: Engineer

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

HAEIDD Lift Station & Force Main Improvements – City of Hammond

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR FOR
CONSTRUCTION CONTRACT (STIPULATED PRICE)**

Prepared by



Issued and Published Jointly by



Endorsed by



Copyright © 2013:

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

The copyright for this EJCDC document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between City of Hammond ("Owner") and
XX ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Improvements to the HAEIDD lift station (LS#51) and force main through installation of new duplex submersible pumping equipment (800 GPM @ 60' TDH)(dry pit application), installation of a new twelve-inch inner diameter (12" I.D.) force main (PE/PVC) (18,300 LF), installation of air release valves, haul-in, grade, compact backfill and limestone, installation of new electrical controls, installation of force main bypass assembly, including but not limited to, yard piping, clearing & grubbing, and other tasks as shown on the drawings, indicated on the Bid Form, or reasonably implied.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is described as follows:
HAEIDD Lift Station & Force Main Improvements [FY2024]

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by Jay C. Pittman, P.E.;
Spangler Engineering, LLC.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work will be substantially completed within **ONE HUNDRED FIFTY (150) calendar** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **one hundred ninety-five (195) calendar** days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **\$1,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$1,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*
[DELETED]

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Bid Item	Description	Bid Quantity	Engineer's Estimate	
			Unit Price	Extension
1.	Mobilization	1 EA	\$50,000.00	\$ 50,000.00
2.	Misc. Clearing & Sitework - Constr./Traffic Signage	1 EA	50,000.00	50,000.00
3.	Install/Maintain SWPPP/Erosion Control	1 EA	5,000.00	5,000.00
4.	Haul-in/grade/compact Backfill (vehic. measure)	100.0 CY	22.00	2,200.00
5.	Haul-in/grade/compact Limestone (610/#57 - vehic. meas.)	100.0 TN	85.00	8,500.00
6.	Flowable Fill (vehicular measure)	20.0 CY	175.00	3,500.00
7.	Install/open cut 12" FM (PE/PVC)	18,300 LF	60.00	1,098,000.00
8.	Directional Bore (Operation Only) - Ponchatoula Creek Crossing	600 LF	100.00	60,000.00
9.	Directional Bore (Operation Only) - Project-wide	5,325 LF	75.00	399,375.00
10.	Install Air Release Valves	8 EA	5,000.00	40,000.00
11.	Install Duplex Pumping Equipment (LS #51)	1 EA	100,000.00	100,000.00
12.	Yard Piping (LS #51)	1 EA	15,000.00	15,000.00
13.	Install Force Main Bypass Assembly (LS #51)	1 EA	5,000.00	5,000.00
14.	Maintenance of Sewer-Bypass Pumping (LS#51)	1 EA	7,500.00	7,500.00
15.	Tie-in Exst./New SS to Exst./New SS	4 EA	5,000.00	20,000.00
16.	Electrical Work/ Controls	1 EA	10,000.00	10,000.00
Construction Cost Estimate [items "1." - "16."]				\$ 1,874,075.00

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the tenth (10th) day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. Ninety-five percent (95%) of Work completed (with the balance being retainage). ~~If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~
 - b. Ninety-five percent (95%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion **of the entire construction to be provided under the Contract Documents**, Owner shall pay an amount sufficient to increase total payments to Contractor to one-hundred percent (100%) of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less two-hundred percent (200%) of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment **and less five percent (5%) retainage.**

6.03 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of six percent (6%) per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 7, inclusive).
 - 2. Performance bond (C-610 pages 1 to 3, inclusive).
 - 3. Payment bond (C-616 pages 1 to 3, inclusive).
 - 4. General Conditions (C-700 pages 1 to 60, inclusive).
 - 5. Supplementary Conditions (C-800 pages 1 to 7, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.

7. Drawings (not attached but incorporated by reference) consisting of 24 sheets with each sheet bearing the following general title: "HAEIDD Lift Station & Force Main Improvements [FY2024] for the City of Hammond",
 8. Addenda (number _____, inclusive).
 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages 0400-1 to 0400-3, inclusive).
 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

City of Hammond, LA

XXXXXXXXXXXXXXXXXXXX

By: _____

By: _____

Title: Pete Panepinto, Mayor

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

City of Hammond

P. O. Box 2788

Hammond, LA 70404

License No.: _____

(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

PERFORMANCE BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

City of Hammond

P.O. Box 2788

Hammond, LA 70404

CONSTRUCTION CONTRACT

Effective Date of the Agreement: _____

Amount: **\$ xxx,xxx.xx**

Description (name and location): **HAEIDD Lift Station & Force Main Improvements [FY2024]**

BOND

Bond Number: _____

Date (not earlier than the Effective Date of the Agreement of the Construction Contract): _____

Amount: **\$ xxx,xxx.xx**

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (seal)

Surety's Name and Corporate Seal (seal)

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

City of Hammond, LA

P.O. Box 2788

Hammond, LA 70404

CONSTRUCTION CONTRACT

Effective Date of the Agreement: _____

Amount: **\$ xxx,xxx.xx**

Description (name and location): **HAEIDD Lift Station & Force Main Improvements [FY2024]**

BOND

Bond Number: _____

Date (not earlier than the Effective Date of the Agreement of the Construction Contract): _____

Amount: **\$ xxx,xxx.xx**

Modifications to this Bond Form: None See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(seal)

Contractor's Name and Corporate Seal

(seal)

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
 13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
 14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
 15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
- 16. Definitions**
- 16.1 **Claim:** A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 - 16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
 18. Modifications to this Bond are as follows:

NOTICE TO PROCEED

Owner: City of Hammond Owner's Contract No.: _____
Contractor: XXXXXXXXXXXXXXXXXXXXXXXXXXXX Contractor's Project No.: _____
Engineer: Spangler Engineering, LLC Engineer's Project No.: _____
Project: HAEIDD Lift Station & Force Main Improvements [FY2024] Contract Name: _____
Effective Date of Contract: _____

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on May 20, 2024.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the number of days to achieve Substantial Completion is ONE HUNDRED FIFTY (150) calendar days, and the number of days to achieve readiness for final payment is one-hundred ninety-five (195) calendar days.

The completion date, unless modified by the contract documents, shall therefore be _____.

Before starting any Work at the Site, Contractor must comply with the following:

No additional requirements prior to commencement of work.

Owner: City of Hammond

Authorized Signature
By: Pete Panepinto
Title: Mayor
Date Issued: _____

Copy: Engineer

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



Endorsed by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC's Guide to the Preparation of Supplementary Conditions (EJCDC® C-800, 2013 Edition). The full EJCDC Construction series of documents is discussed in the Commentary on the 2013 EJCDC Construction Documents (EJCDC® C-001, 2013 Edition).

Copyright © 2013:

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

The copyright for this document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	<u>Page</u>
Article 1 – Definitions and Terminology.....	1
1.01 Defined Terms	1
1.02 Terminology	4
Article 2 – Preliminary Matters	5
2.01 Delivery of Bonds and Evidence of Insurance	5
2.02 Copies of Documents	5
2.03 Before Starting Construction.....	6
2.04 Preconstruction Conference; Designation of Authorized Representatives.....	6
2.05 Initial Acceptance of Schedules.....	6
2.06 Electronic Transmittals.....	7
Article 3 – Documents: Intent, Requirements, Reuse	7
3.01 Intent.....	7
3.02 Reference Standards	7
3.03 Reporting and Resolving Discrepancies.....	8
3.04 Requirements of the Contract Documents	8
3.05 Reuse of Documents	9
Article 4 – Commencement and Progress of the Work.....	9
4.01 Commencement of Contract Times; Notice to Proceed	9
4.02 Starting the Work	9
4.03 Reference Points	9
4.04 Progress Schedule	10
4.05 Delays in Contractor’s Progress.....	10
Article 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions.....	11
5.01 Availability of Lands.....	11
5.02 Use of Site and Other Areas	11
5.03 Subsurface and Physical Conditions	12
5.04 Differing Subsurface or Physical Conditions.....	12
5.05 Underground Facilities	14
5.06 Hazardous Environmental Conditions at Site.....	15
Article 6 – Bonds and Insurance.....	17
6.01 Performance, Payment, and Other Bonds	17
6.02 Insurance—General Provisions	18
6.03 Contractor’s Insurance	19

6.04	Owner’s Liability Insurance	21
6.05	Property Insurance	21
6.06	Waiver of Rights	22
6.07	Receipt and Application of Property Insurance Proceeds	23
Article 7 – Contractor’s Responsibilities.....		24
7.01	Supervision and Superintendence.....	24
7.02	Labor; Working Hours	24
7.03	Services, Materials, and Equipment	24
7.04	“Or Equals”	24
7.05	Substitutes.....	25
7.06	Concerning Subcontractors, Suppliers, and Others.....	27
7.07	Patent Fees and Royalties	28
7.08	Permits	29
7.09	Taxes.....	29
7.10	Laws and Regulations	29
7.11	Record Documents	30
7.12	Safety and Protection	30
7.13	Safety Representative	31
7.14	Hazard Communication Programs.....	31
7.15	Emergencies	31
7.16	Shop Drawings, Samples, and Other Submittals	31
7.17	Contractor’s General Warranty and Guarantee	33
7.18	Indemnification	34
7.19	Delegation of Professional Design Services.....	34
Article 8 – Other Work at the Site		35
8.01	Other Work.....	35
8.02	Coordination.....	35
8.03	Legal Relationships	36
Article 9 – Owner’s Responsibilities		37
9.01	Communications to Contractor	37
9.02	Replacement of Engineer	37
9.03	Furnish Data	37
9.04	Pay When Due	37
9.05	Lands and Easements; Reports, Tests, and Drawings	37
9.06	Insurance	37
9.07	Change Orders.....	37
9.08	Inspections, Tests, and Approvals	37

9.09	Limitations on Owner’s Responsibilities.....	37
9.10	Undisclosed Hazardous Environmental Condition	38
9.11	Evidence of Financial Arrangements	38
9.12	Safety Programs	38
Article 10 – Engineer’s Status During Construction		38
10.01	Owner’s Representative	38
10.02	Visits to Site	38
10.03	Project Representative	38
10.04	Rejecting Defective Work.....	39
10.05	Shop Drawings, Change Orders and Payments	39
10.06	Determinations for Unit Price Work.....	39
10.07	Decisions on Requirements of Contract Documents and Acceptability of Work.....	39
10.08	Limitations on Engineer’s Authority and Responsibilities	39
10.09	Compliance with Safety Program	40
Article 11 – Amending the Contract Documents; Changes in the Work.....		40
11.01	Amending and Supplementing Contract Documents	40
11.02	Owner-Authorized Changes in the Work	41
11.03	Unauthorized Changes in the Work	41
11.04	Change of Contract Price.....	41
11.05	Change of Contract Times	42
11.06	Change Proposals	42
11.07	Execution of Change Orders.....	43
11.08	Notification to Surety	43
Article 12 – Claims.....		43
12.01	Claims	43
Article 13 – Cost of the Work; Allowances; Unit Price Work		44
13.01	Cost of the Work	44
13.02	Allowances	47
13.03	Unit Price Work	47
Article 14 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work		48
14.01	Access to Work.....	48
14.02	Tests, Inspections, and Approvals	48
14.03	Defective Work.....	49
14.04	Acceptance of Defective Work.....	49
14.05	Uncovering Work.....	49
14.06	Owner May Stop the Work.....	50
14.07	Owner May Correct Defective Work.....	50

Article 15 – Payments to Contractor; Set-Offs; Completion; Correction Period.....	51
15.01 Progress Payments	51
15.02 Contractor’s Warranty of Title	53
15.03 Substantial Completion	53
15.04 Partial Use or Occupancy	54
15.05 Final Inspection	55
15.06 Final Payment.....	55
15.07 Waiver of Claims.....	56
15.08 Correction Period	56
Article 16 – Suspension of Work and Termination	57
16.01 Owner May Suspend Work.....	57
16.02 Owner May Terminate for Cause	57
16.03 Owner May Terminate For Convenience	58
16.04 Contractor May Stop Work or Terminate	58
Article 17 – Final Resolution of Disputes.....	59
17.01 Methods and Procedures	59
Article 18 – Miscellaneous	59
18.01 Giving Notice	59
18.02 Computation of Times.....	59
18.03 Cumulative Remedies.....	59
18.04 Limitation of Damages	60
18.05 No Waiver.....	60
18.06 Survival of Obligations.....	60
18.07 Controlling Law.....	60
18.08 Headings	60

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.
 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and

Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

- D. *Defective:*
1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor's Insurance:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner's Insurance:* After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake

responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and

binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. abnormal weather conditions;
 - 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

- A. *Limitation on Use of Site and Other Areas:*
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party

indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
 - 1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 - 2. is of such a nature as to require a change in the Drawings or Specifications; or
 - 3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to

industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.

- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds:* The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance:* If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
 - 5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and

damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with

such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner’s written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 *“Or Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier,

the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent

possible such requests shall be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making

changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and

Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

- A. *Shop Drawing and Sample Submittal Requirements:*
 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
 2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in 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.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.
- E. *Resubmittal Procedures:*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 2. 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 to secure reimbursement for such charges.
 3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design

professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law,

and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER’S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner’s Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will

not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and

limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates

of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
 - 3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent

of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of

Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.

- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
 5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements

approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a

decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.
- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for 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, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
- D. *Payment Becomes Due:*
1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- E. *Reductions in Payment by Owner:*
1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons

therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final

payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals

and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon.

The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SC-Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

SC 1.01.A.18 - Add the following language at the end of last sentence of Paragraph 1.01.A.18.

Drawings:

Drawings shall be issued by the Engineer and shall include the appropriate engineer(s)'s certification(s)/stamp(s) in order to be considered a valid requirement of the Work.

SC 1.01.A.20 - Add the following language at the end of last sentence of Paragraph 1.01.A.20.

Engineer:

The Engineer shall be a licensed fulltime employee of Spangler Engineering, LLC, 214 Southwest Railroad Avenue; Hammond, LA 70403, unless otherwise noted on individual plan sheets (e.g., electrical portions of the project).

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC 4.05.C.2 Amend Paragraph 4.05.C.2 by striking out the text: "abnormal weather conditions;" and inserting the following text:

2. Abnormal weather conditions and delay(s) due to inclement weather. If, in the opinion of the Engineer, 60% of the work force can work for a period of six (6) working hours or greater, a delay day will not be granted;

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03 Subsurface and Physical Conditions

SC 5.03 Add Paragraph 5.03.C:

C. Reports of explorations or tests of subsurface conditions at or adjacent to the Site(s), or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are indicated on the drawings pursuant to exploratory excavations and field surveys.

SC-5.06 Hazardous Environmental Conditions

SC 5.06 Delete Paragraph 5.06.A in its entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

ARTICLE 6 – BONDS AND INSURANCE

SC-6.03 Contractor’s Liability Insurance

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers’ Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State: Statutory

Federal, if applicable (e.g., Longshoreman’s): Statutory

Jones Act coverage, if applicable:

Bodily injury by accident, each accident \$ N/A

Bodily injury by disease, aggregate \$ N/A

Employer’s Liability:

Bodily injury, each accident \$ 500,000

Bodily injury by disease, each employee \$ 500,000

Bodily injury/disease aggregate \$ 500,000

For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker’s compensation or commercial general liability policy with a minimum limit of:

\$ N/A

Foreign voluntary worker compensation Statutory

2. Contractor’s Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate \$ 2,000,000

Products - Completed Operations Aggregate \$ 1,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence (Bodily Injury & Property Damage) \$ 1,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person \$ 1,000,000

Each accident \$ 1,000,000

Property Damage:	
Each accident	\$ <u>100,000</u>
	<i>[or]</i>
Combined Single Limit of	\$ <u>1,000,000</u>
4. Excess or Umbrella Liability:	
Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</u>
5. Contractor's Pollution Liability:	
Each Occurrence	\$ <u>N/A</u>
General Aggregate	\$ <u>N/A</u>
<input checked="" type="checkbox"/>	If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract
6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: <i>[Not applicable]</i>	
7. Contractor's Professional Liability:	
Each Claim	\$ <u>N/A</u>
Annual Aggregate	\$ <u>N/A</u>

SC-6.05 *Property Insurance*

SC-6.05. Add the following to the list of requirements in Paragraph 6.05.A (Builders Risk), as a numbered item:

13. be subject to a deductible amount of no more than \$5,000.00 for direct physical loss in any one occurrence.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC 7.04.A Amend the third sentence of Paragraph 7.04.A by striking out the following words: **Unless the specification or description contains or is followed by words reading that no like, equivalent, or 'or-equal' item is permitted.**

SC 7.04.A.1 Amend the last sentence of Paragraph a.3) by striking out "and;" and adding a period at the end of Paragraph a.3).

SC 7.04.A.1 Delete paragraph 7.04.A.1.a.4) in its entirety and insert the following in its place:
[Deleted]

SC 7.06.A Amend Paragraph 7.06.A by adding the following text to the end of the Paragraph:
The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC 7.06.B Delete paragraph 7.06.B in its entirety and insert the following in its place:
[Deleted]

SC 7.06.E Amend the second sentence of Paragraph 7.06.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.**
- 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.**
 - 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.**
 - 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.**
 - 4. Liaison:**
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.**
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.**
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.**
 - 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.**
 - 6. Shop Drawings and Samples:**
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.**
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.**
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.**
 - 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**
 - 8. Review of Work and Rejection of Defective Work:**
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**

- b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:
- a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. Records:
- a. Prepare a daily report or keep a diary/log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail (as in the case of observing test procedures); and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
11. Reports:
- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
 - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to

the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC 13.02.C Delete Paragraph 13.02.C in its entirety and insert the following in its place:
[Deleted]

ARTICLE 14 – TESTS, INSPECTIONS, AND APPROVALS

SC 14.02.B Delete the text of paragraph 14.02.B., and insert the following:
Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests required by the Contract Documents to be furnished and paid for by the Owner, except costs incurred in connection with tests or inspections of EARTHWORK compaction.

The CONTRACTOR shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests required by the Contract Documents for EARTHWORK compaction.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

- SC 15.01.B.3** Add the following language at the end of paragraph 15.01.B.3:
No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.
- SC 15.01.B.4** Add the following new Paragraph after Paragraph 15.01.B.3:
The Application for Payment form to be used on this Project is a “Partial Pay Estimate” form (MS Excel format) initially prepared by the Engineer and subsequently completed by the Contractor monthly; or, at Contractor’s option, form “EJCDC C-620”.

HAEIDD LIFT STATION & FORCE MAIN IMPROVEMENTS [FY2024] for City of Hammond

PARTIAL PAY ESTIMATE No.: One (1)

Period Covered: 4/##/24 - 9/##/24

Bid Item	Description	Bid Quantity	Contractor		Previous Quantity	Completed this Period		TOTAL TO DATE	
			Unit Price	Extension		Quantity	Extension	Quantity	Extension
1.	Mobilization	1 EA	\$ 50,000.00	\$ 50,000.00	0%	0%	\$	0%	\$
2.	Misc. Clearing & Siterwork - Constr./Traffic Signage	1 EA	50,000.00	50,000.00	0	0	0	0	0
3.	Install/Maintain SWPPP/Erosion Control	1 EA	5,000.00	5,000.00	0	0	0	0	0
4.	Haul-in/grade/compact Backfill (vehic. measure)	100.0 CY	22.00	2,200.00	0%	0%	0	0%	0
5.	Haul-in/grade/compact Limestone (610/#57 - vehic. meas.)	100.0 TN	85.00	8,500.00	0%	0%	0	0%	0
6.	Flowable Fill (vehicular measure)	20.0 CY	175.00	3,500.00	0%	0%	0	0%	0
7.	Install/open cut 12" FM (PE/PVC)	18,300 LF	60.00	1,098,000.00	0%	0%	0	0%	0
8.	Direct. Bore (Oper. Only) - Ponchatoula Crk. Crossing	600 LF	100.00	60,000.00	0%	0%	0	0%	0
9.	Direct. Bore (Oper. Only) - Project-wide	5,200 LF	75.00	390,000.00	0%	0%	0	0%	0
10.	Install Air Release Valves	8 EA	5,000.00	40,000.00	0%	0%	0	0%	0
11.	Install Duplex Pumping Equipment (LS #51)	1 EA	100,000.00	100,000.00	0%	0%	0	0%	0
12.	Yard Piping (LS #51)	1 EA	15,000.00	15,000.00	0%	0%	0	0%	0
13.	Install Force Main Bypass Assembly (LS #51)	1 EA	5,000.00	5,000.00	0%	0%	0	0%	0
14.	Maintenance of Sewer-Bypass Pumping (LS#51)	1 EA	7,500.00	7,500.00	0%	0%	0	0%	0
15.	Tie-in Exst./New SS to Exst./New SS	4 EA	5,000.00	20,000.00	0%	0%	0	0%	0
16.	Electrical Work/ Controls	1 EA	10,000.00	10,000.00	0%	0%	0	0%	0
			CURRENT CONTRACT AMOUNT:	\$ 1,864,700.00			\$		\$
			ORIGINAL CONTRACT AMOUNT:	\$ 1,864,700.00			Amount Earned:	\$	\$
			Change Order No. #:				Less Retainage		
			Change Order No. #:				Subtotal	\$	\$
			CURRENT CONTRACT AMOUNT:	\$ 1,864,700.00			Previous Payments	XXXXXXXXXX	
							Net Amount Due:	\$	\$

Percentage of Project Completion: 0.00%

By (Contractor): _____
 Name (Title): _____
 Contractor: _____

APPROVAL

Amount Recommended this Cert. No. **One (1)** : _____

Recommended by: _____ Date: _____
 Name (Title): Jay C. Pittman, P.E.

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	City of Hammond, LA	Owner's Contract No.:	_____
Contractor:	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Contractor's Project No.:	_____
Engineer:	Spangler Engineering, LLC	Engineer's Project No.:	_____
Project:	HAEIDD Lift Station & Force Main Improvements [FY2024]		Contract Name: _____

This [preliminary] [final] Certificate of Substantial Completion applies to:

All Work The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows:

Amendments to Owner's responsibilities: None As follows

Amendments to Contractor's responsibilities: None As follows:

The following documents are attached to and made a part of this Certificate: **Notice by Owner of Acceptance of Work; Punch List w/values**

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____	By: _____	By: _____
(Authorized signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: Jay C. Pittman, P.E.	Title: Pete Panepinto, Mayor	Title: _____
Date: _____	Date: _____	Date: _____

TECHNICAL SPECIFICATIONS

GENERAL CONSTRUCTION

1—GENERAL

The CONTRACTOR shall provide all plant, labor, equipment and materials and perform all operations necessary to complete the work in strict accordance with the Plans and Specifications and subject to the terms and conditions of the Contract. The Technical Specifications included herein are general in nature and are hereby superseded by more stringent requirements if included in the ensuing sections of the "Technical Specifications".

2—CONTRACTOR'S RESPONSIBILITIES & SUBMISSIONS REQUIRED

After receipt of the "Notice of Award", the CONTRACTOR shall execute the following items “(A)” through “(H)” to be submitted at or prior to the Pre-Construction conference:

- (A) Submit current and binding proof of insurance coverage in favor of the OWNER with expiration date(s) of coverage occurring subsequent to the date of commencement of the work. For coverage(s) expiring during the contract term, the CONTRACTOR shall submit not later than twenty (20) calendar days prior to the date of expiration of subject coverage(s) an amendment to the insurance binder extending the coverage(s) to a date subsequent to the contract completion date.
- (B) Submit fully executed/notarized “Attestation Clause” (per LA RS 38:2227), “Status Verification Affidavit” (per LA RS 38:2212.10), and "Non-Collusion Affidavit".
- (C) Submit partially executed "Agreement" (EJCDC C-520) with original signatures of the president of the corporation (or another corporate officer, authorized by resolution to sign the "Agreement" on behalf of the corporation) and the secretary of the corporation.
- (D) Submit fully executed Bonds (EJCDC C-610/C-615) with notarized and fully executed Power(s) of Attorney. The Bonds shall be underwritten by a company which is on the current "Treasury Circular 570" list, which proof shall also be submitted.
- (E) Submit within ten (10) days after signing of the Contract duplicate list of Materials and Equipment actually ordered including source of supply, description, quantity and promised delivery date. (Note: This provision does not preclude required shop drawing submittals/prior approvals).
- (F) Submit one copy of any and all permits obtained for jobs.
- (G) Submit names of subCONTRACTORs for approval of Engineer.
- (H) Submit to Engineer, concurrently with return of acknowledged "Notice of Award", a Construction Schedule. [Note article “4 – Construction Schedule” below]

Submit at appropriate time(s) the following:

- (I) Submit Partial Pay Requests monthly; submit invoices for materials on which payment is requested, including ticketed haul-in materials. Material inventory is subject to payment for properly invoiced amounts provided said inventory is stored on property controlled or owned by the OWNER, or provided said inventory is stored in a bonded warehouse approved in advance by the ENGINEER.
- (J) Submit other documents as otherwise called for within these specifications.
- (K) A **principal** of the corporation shall make provisions to attend the pre-construction conference, and the final inspection of this project. *
- (L) The **superintendent** (or other representative of the CONTRACTOR approved in advance by the ENGINEER) shall attend progress meetings for this project.

(M) The tentative schedule for items “(K)” and “(L)” above is as follows:

**HAEIDD Lift Station & Force Main Improvements [FY2024]
for City of Hammond**

DATE	MILESTONE
3/21/2024 (Thurs.)	Begin advertising for bids
4/11/2024 (Thurs.)	Pre-Bid Conference (10:00 a.m., Engineer’s Office)
4/18/2024 (Thurs.)	Bid Opening (10:00 a.m., City Council Chambers)
4/23/2024 (Tues.)	Award of bid (5:30 p.m., regular meeting of City Council)
5/7/2024 (Tues.)	Pre-Construction Conference (10:00 a.m., Engineer’s Office) *
5/20/2024 (Mon.)	Commence construction - 150 calendar days
10/17/2024 (Thurs.)	Complete construction – Final Inspection

* A **principal** of the corporation (or **owner** in the case of sole proprietorships) shall make provisions to attend the pre-construction conference, and the final inspection of this project.

3—PERMITS

The CONTRACTOR shall be fully responsible for reviewing and complying with all applicable permits (local, parish, state, and US Government) which have been obtained for this project, or may be reasonably expected to impact this project.

The CONTRACTOR shall include all necessary work methods in his bid to ensure that all requirements set forth in applicable permits obtained by the Owner, as well as any permits obtained by the CONTRACTOR, are met.

4—CONSTRUCTION SCHEDULE

CONTRACTOR shall, as stipulated in above Article "2", subpara. "(H)", prepare and submit to the engineer for approval, a practicable schedule showing the order in which the CONTRACTOR proposes to carry on the work, dates on which he will start the several salient features of the work and the contemplated dates for completion of each.

This schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any one time. The Construction Schedule shall be prepared to reflect completion of the project within the contract term. The CONTRACTOR shall enter on this chart the actual progress at the end of each month and shall submit copies of same with his requests for partial payments, or by the tenth of the following month, should there be no request for partial payments.

The CONTRACTOR shall furnish sufficient forces, construction plant, and equipment and shall work such hours, including night shifts, as may be necessary to insure the prosecution of work in accordance with approved progress schedule. If, in the opinion of the Engineer, the CONTRACTOR falls behind the progress schedule, the CONTRACTOR shall take such steps as may be necessary to improve his progress by such means as increasing the number of men, number of shifts, days of work, and/or amount of construction plant, all without additional cost to owner.

5—COOPERATION BETWEEN CONTRACTORS

The Owner reserves the right at any time to contract for and perform other or additional work on or near the work covered by the Contract.

When separate contracts are let within the limits of any one project, each CONTRACTOR shall conduct his work so as not to interfere with or hinder the progress of completion of the work being performed by the other CONTRACTORS. CONTRACTORS working on the same project shall cooperate with others as directed.

Each CONTRACTOR involved shall assume all liability, financial or otherwise, in connection with the contract and shall protect and save harmless the Owner, the Engineer, and the Owner's and Engineer's agents and representatives from any and all damages or claims that may arise because of inconvenience, delay or loss experienced by him because of the presence and operations of the other CONTRACTORS working within the limits of the same project.

The CONTRACTOR shall arrange his work and shall place and dispose of the materials being used so as not to interfere with the operations of the other CONTRACTORS within the limits of the same project. He shall join the work with that of the others in an acceptable manner and shall perform it in proper sequence to that of others.

6—NIGHT AND HOLIDAY WORK

Whenever the operations called for on the Plans or in the Contract Documents require work to be done at night, or Sunday or legal holidays, the CONTRACTOR shall give the Engineer sufficient notice to allow for arrangements for the necessary inspection personnel.

7—NOTICE TO PROCEED

The CONTRACTOR shall not commence work under this Contract until a "Notice to Proceed" (EJCDC C-550) is issued to him and signed by either the Owner or the Engineer.

8—MATERIAL CERTIFICATES

The CONTRACTOR shall submit certificates showing that all materials used conform to the applicable standards. These test reports may be furnished by the manufacturer or by an approved independent testing laboratory. Accept where otherwise noted, the Owner shall be responsible for Testing Laboratory costs.

9—LAYOUT OF WORK

The Engineer shall establish a system of base lines and set bench marks at prominent points around the site of the work. Grades, lines and levels shall be established and maintained by the CONTRACTOR, but shall be subject to check and approval by the Engineer.

The CONTRACTOR shall verify all lines, grades, levels and dimensions, as shown on the drawings, and shall report any error or inconsistencies to the Engineer before commencing work.

The CONTRACTOR shall furnish and maintain stakes, batter boards, etc., and give assistance, including certified helpers, as may be required by the Engineer for checking line and grade.

The CONTRACTOR shall keep the Engineer informed, a reasonable time in advance, of the times and places at which he intends to work in order that base lines and bench marks may be checked and necessary measurements for record and payment may be made with the minimum of inconvenience to the Engineer or of delay to the CONTRACTOR. It is the intention not to delay the work for checking base lines and benchmarks, but, when necessary, working operations shall be suspended for such reasonable time as the Engineer may require for this purpose. **The CONTRACTOR assumes all responsibility for re-stocking, freight, and other miscellaneous costs, for materials ordered and/or delivered in advance of completed construction staking.**

10—EARTHWORK

The CONTRACTOR shall furnish all tools, equipment, labor, materials, etc., to complete all items of earthwork which shall include excavation, filling and backfilling of earth and rock. There shall be no distinction between earth excavation and rock excavation.

11—STRUCTURAL EXCAVATION

All excavations shall be made to proper depth and correct line, with sufficient allowance for correct forming, shoring and inspection of foundation work. Pouring of concrete against earth side walls will not be permitted, unless specifically approved by the Engineer.

Rough excavation must be stopped at least three (3") inches from finished grade; fine excavation and dressing must be done by hand to the required depth prior to concreting operations.

If the bottom of the excavation is made mucky or unstable due to the CONTRACTOR's operations or carelessness, the excavation shall be deepened to undisturbed soil just before concreting operations, and the thickness of concrete shall be increased accordingly without additional compensation to the CONTRACTOR.

Bottoms shall be level and free of loose material. If excavations are carried below the level called for by the Plans, foundations must be poured at this level, on undisturbed soil, and the thickness of footings increased to make up the discrepancy without additional compensation.

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, tanks, etc., free from seepage, sanding or running water at all times throughout the period of construction.

The CONTRACTOR shall assume all responsibility for security of the excavation required, employing bracing, lining or other accepted means necessary to accomplish same.

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.

12—FILLING AND BACKFILLING

Excavated earth free from debris or organic material may be used for backfilling foundations or for fill. Where concrete slabs are indicated to be poured upon earth fill, without forms, the earth upon which the slabs will rest shall first be thoroughly wetted and compacted with pneumatic rammer, size 2¼ inch x 6 feet. The fill material shall be placed in layers not to exceed 6 inches in thickness and compacted to a density or hardness exceeding the natural earth; to insure against settlement and subsequent cracking of the slab.

The CONTRACTOR shall backfill all subgrade excavations immediately after Engineer's inspection and approval of work to be covered. The CONTRACTOR shall securely tamp the backfilling with pneumatic rammer round all walls and piers. No backfilling or filling shall be done without approval of the Engineers, especially in the case of concrete walls sustaining earth pressure. Surplus material resulting from the prosecution of the excavation and backfill shall be used in grading the site or removed from the site and disposed of as directed by the Engineer. In no case shall any surplus material be deposited on adjacent lands. Fill used for grading shall be placed in layers not to exceed 12 inches in thickness and shall be compacted by suitable means to a density equal to that of the surrounding natural ground.

Where grasses/landscaping are impacted by the construction operations, the CONTRACTOR shall backfill and top dress all ruts and "scarred" areas with a minimum of 2" thick topsoil at no direct pay prior to seeding and fertilizing [RE: Article "19"]. Topsoil shall conform to LaDOTD Standard Specifications Section 715. The completed project shall include fine grading of all areas impacted by the construction operations to easy contours.

13—FORMS AND FALSEWORK

The CONTRACTOR shall be responsible for the design of forms/falsework and shall provide all labor, materials, and equipment for construction forms and falsework for all concrete work.

All falsework shall be constructed true and rigid, thoroughly braced (laterally & diagonally) and sufficiently strong to carry the load imposed thereon without settlement or deformation.

For calculating the loads on falsework, a weight of 150 pounds per cubic foot shall be assumed for concrete and a live load allowance of 50 pounds per square foot of horizontal surface of the form shall be included.

All timber used in falsework shall be sound, in good condition and free from defects which would impair its strength. Form lumber shall be of good quality, free from loose knots, holes, twists, shakes or decay.

All forms for surfaces which will remain exposed in the finished work shall be lined with waterproofed plywood, tempered masonite or metal. Forms shall be carefully built with planed surfaces and tight joints. Joints in lined forms shall be kept to a minimum. Lined forms shall have surfaces oiled with non-staining oil. Forms shall be built mortar-tight and of material sufficiently rigid to prevent bulging between supports and shall be set and maintained to the lines designated until the concrete is sufficiently hardened to permit form removal. During the elapsed time between the building of the forms and pouring the concrete, the forms shall be maintained in a manner to prevent warping or shrinking. If the forms bulge or sag at any point when the concrete is placed in them, that portion of the concrete causing distortion shall be removed immediately and the forms properly repaired and strengthened before continuing work. No forming material shall be left in

place upon completion of the work. Forms shall be designed for the pressure exerted by a liquid weighing 150 pounds per cubic foot for vertical loads and not less than 85 pounds per cubic foot for horizontal pressure. The rate of placing the concrete shall be taken into consideration in determining the depth of the equivalent liquid for horizontal loads. An additional 50 pounds per square foot shall be allowed on horizontal surfaces. All forms shall be constructed to permit removal without damage to or "honeycombing" of the concrete.

All anchor bolts, pipe wall casting, conduits, etc., shall be installed prior to placement of concrete. Metal or wooden spreaders which are separate from the forms shall be entirely removed as the concrete is being placed. Internal wall ties shall be of such a type that when the forms are removed, the metal remaining in the wall will be at least an inch back from exposed surface of the wall. Holes left by removal of the ties shall be pointed flush, to the satisfaction of the Engineer.

Forms or form lumber to be reused shall be maintained clean and in good condition as to accuracy, shape, strength, rigidity, tightness and smoothness of surface. Any timber which is split, warped, bulged, marred or has defects that may produce work inferior to that resulting from using new materials shall not be reused.

All form surfaces shall be wetted prior to the placement of concrete. When concrete is placed, the forms shall be clean and free from chips, dirt, sawdust & other extraneous matter. This shall be accomplished by; sweeping, washing with water or blowing with compressed air.

A man shall be engaged at all times to watch the forms and falsework while concrete is being placed and to see that the forms and falsework are strengthened where necessary.

Concrete forms and falsework shall not be removed until the concrete has attained sufficient strength, in the opinion of the Engineers, to support its own weight, construction live loads and any other loads to which it is subjected after removal of forms.

A competent and experienced foreman shall be in charge of the removal of forms. At no time shall more men be engaged in the striking of forms than he can fully direct and supervise. No patching or concrete work shall be done until concrete has been examined by the Engineer.

14—REINFORCING STEEL

Bar reinforcement shall be open hearth, new billet steel of intermediate grade, conforming to requirements of the Standard Specifications for Billet Steel Bars with Concrete Reinforcement ASTM A615, with deformations in accordance with ASTM A305.

Reinforcing steel above one-quarter (1/4") inch diameter for structures shall be deformed bars. The form of the bars shall be such as to maintain a new section equivalent to a plain square or round bar of equal nominal size.

The use of cold twisted bars will not be permitted.

Wire for fabric reinforcement shall be cold drawn from rods hot rolled from open hearth billets, and shall conform to the Standard Specifications for Cold Drawn Steel wire for Concrete Reinforcement, ASTM A82.

15—PLACING REINFORCING STEEL

Metal reinforcement shall be accurately positioned as indicated on the Plans and secured against displacement with annealed iron wire \geq No. 18 gauge or by suitable slips at intersections, and shall be supported by approved precast concrete blocks, or galvanized metal spacers.

Slab or beam bolsters with high chairs may be used for holding the steel in position. Slab and beam bolsters and high chairs shall be placed at such intervals that the reinforcement is in proper position throughout and shall be sufficiently sturdy to hold the reinforcement in proper position while concrete is being deposited. Placing and fastening of the reinforcement in each section shall be approved by the Engineer before any concrete is being deposited. Placing and fastening of the reinforcement in each section shall be approved by the Engineer before any concrete is deposited.

Reinforcing steel for members in which the concrete is deposited against the ground shall have not less than three (3") inches of concrete between it and the ground contact surface. If concrete surfaces, after removal of the form, are to be exposed to the weather or be in contact with the ground, the reinforcing steel

shall be protected with not less than two (2") inches of concrete for bars larger than #5 and 1-1/2 inches for #5 bars or smaller.

The concrete protective covering between all reinforcing steel and all exterior surfaces shall be not less than 1-1/2 inches.

16—CONCRETE

Unless otherwise shown or called for on the plans or elsewhere in these specifications, all concrete shall be Portland Cement Concrete for Minor Structures (Section 901, Class M), and attain a minimum unit compressive strength of 3,000 psi, at the end of 28 days.

All concrete shall be reinforced with 6x6/10-10 WWF, (or acceptable fibermesh reinforcement) with 6" minimum thickness (unless otherwise detailed for sidewalks). Sufficient "turndown" footings shall be cast-in-place monolithically to ensure bearing a minimum of 4" below natural adjoining grade.

The CONTRACTOR shall provide all labor, material and equipment necessary for plain and reinforced concrete work as shown on the Plans and hereinafter specified.

To ensure inclusion of all wall castings, conduits, anchor bolts, etc. the CONTRACTOR shall notify all other CONTRACTORS, subCONTRACTORS, manufacturers' representatives and the Engineer in advance of his intentions to pour any particular portion of the concrete work. He shall further cooperate with them in the coordination of the various phases of the work.

The mixing, placing and curing of all concrete shall be executed under the supervision of an experienced foreman. The CONTRACTOR shall have at least one foreman at each location where concrete is being poured to assure placement, puddling, and spading of the concrete in a manner as hereinafter specified.

Include all concrete and related work shown or specified. Concrete work included in other divisions of the specifications that is not specifically described, shall comply with requirements of this division.

(A) Fine Aggregates

Fine aggregates shall conform to Standard Specifications for Concrete Aggregates, ASTM C33, except for gradation, which shall be as follows:

<u>Passing Sieve Size</u>	<u>Percent</u>
3/8"	100
No. 4	95 to 100
N. 16	65 to 95
No. 50	7 to 30
No. 100	≤ 7

At the time of use, the aggregate shall be free from foreign materials.

(B) Cement

All cement hauled to the job, bags, or sacks, shall be in original unopened containers showing brand and name of manufacturer. Cement shall be Portland Cement of American manufacture, conforming to the Standard Specifications for Portland Cement Types 1, 2, and 3, ASTM C150.

(C) Coarse Aggregates

Coarse aggregates shall conform to the Standard Specifications for Concrete Aggregate ASTM C33, 1-1/2 inch to No. 4 size.

(D) Mixing Water

Water used in making mortar or concrete shall be clean and free from oil, alkali, sugar other deleterious substances.

(E) Admixture

Unless otherwise noted, all concrete except 3000 psi concrete used for fill concrete may obtain an admixture of plastiment with the Engineer's approval.

17—GRASS SOD

At location shown on the plans, and as reasonably implied, the CONTRACTOR shall furnish, haul, plant, roll, water, and maintain live grass sod at locations shown on the plans or as directed by the Engineer. Slab sod shall be either field grown or approved nursery grown grass.

Field grown grass shall be CENTIPEDE grass, or other approved grass native to Tangipahoa Parish; nursery grown grass shall be centipede.

Sod shall be free from noxious weeds or other vegetation.

Water may be obtained from any source except brackish or oily water shall not be used.

Slab sod shall be cut with approved mechanical or manual sod cutters. The designated area shall be mowed when necessary, and sod shall be cut to a minimum depth of 1.5" for field grown grass and 1" for nursery grown grass, and to a uniform width and in convenient lengths for handling. Care shall be exercised to retain soil on roots of sod during excavating, hauling, and placement.

Sod cut more than 48 hours prior to placement shall not be used unless authorized.

Sod taken from bare areas that may produce inferior growth will not be accepted.

Watering required in connection with digging, storing, or hauling shall not be directly paid for, but rather included in the unit price bid for the particular item of associated work.

The handling of sod shall be in accordance with Section 714.04 of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges, 2016 edition, latest revision ("LaDOTD Standard Specifications").

Areas to receive slab sod shall be thoroughly pulverized to a depth of approximately 2" and fine dressed to a grade conforming to adjacent natural grade. Liming, if necessary, shall be done when the area is being pulverized. Fertilizing shall be performed at the rate of 90% broadcast over the area to be slab sodded, and the remaining 10% shall be broadcast after placement and rolling.

Upon delivery to the planting site, slab sod shall be transferred onto the surface of the prepared soil. Areas to be sodded shall be adequately watered. Slabs of sod shall be placed with a minimum amount of space between slabs. Slabs which do not fit closely shall be pulled together with suitable tools and pegged if necessary.

Fertilizer and agricultural lime are not direct pay items, and shall conform to Section 718 of the LaDOTD Standard Specifications.

Rolling and watering of slab sod shall be in accordance with LaDOTD Standard Specifications Sections 714.06 and 714.07.

18—EROSION CONTROL

At all natural grade locations disturbed throughout the duration of the project, whether from actual installation of construction features or from construction equipment traversing the vicinity of the work, the CONTRACTOR shall install and maintain temporary erosion control measures to continuously control erosion and prevent water pollution in accordance with Section 204 of LaDOTD Standard Specifications

The CONTRACTOR shall prepare a Storm Water Pollution Prevention Plan (SWPPP) and obtain approval by the Louisiana Department of Environmental Quality (LaDEQ). The CONTRACTOR shall retain the LaDEQ approved SWPPP on site. The CONTRACTOR is required to maintain accurate daily records with regard to the LaDEQ SWPPP on site, and to record observations as required to ensure continuous compliance with LaDEQ stormwater regulations.

If an Erosion Control Plan is included in the contract drawings, that plan sheet is for informational purposes only. Moreover, the CONTRACTOR is responsible for ascertaining the details of the CONTRACTOR's SWPPP and preparing a SWPPP in compliance with LaDEQ guidelines.

Preparation of the CONTRACTOR's SWPPP and compliance therewith are the exclusive responsibility of the CONTRACTOR. Costs for stormwater management shall be considered as incidental to Miscellaneous Clearing & Sitework, and therefore shall be included in the appropriate bid item(s).

19—SEEDING & FERTILIZING

Where existing non-vegetative and vegetative areas (e.g. grassy areas, landscaping, etc.) are to be disturbed as a part of the project resulting in baren soil, the CONTRACTOR shall include in the unit price for the item of work which creates bare earthen surface(s) seeding, fertilizing, and erosion control measures.

Should the CONTRACTOR anticipate use of an alternate method of restoring grassy areas are erosion control measures, the CONTRACTOR shall forward to the Engineer for approval the method and type of erosion control materials to be used, along with manufacturer's specifications and installation instructions. The material submitted shall include written certification of approval of use for this type of construction by the International Erosion Control Association, Inc., or some acceptable similar certification.

The finished shall impede side-slope erosion, loss of existing earthen cover material, and restore grass cover to barren areas.

Prior approvals:

A. Erosion Control Blanket equal to one of the following:

- (1) Excelsior Erosion Control Blanket equal to that manufactured by XCEL—for "Regular" use with 1"x2" green plastic netting. The blanket shall consist of a machine produced mat of curled wood excelsior of 80% (6" or longer) fiber length with a consistent width of fiber evenly distributed throughout the mat. A photodegradable netting manufactured from extruded plastic mesh shall be used on the top side of the blanket.
- (2) Erosion Control Blanket equal to that manufactured by North American Green S75—for moderate run-off conditions (4H:1V slopes), made of 100% wheat straw with light, photodegradable netting on one side, sewn together with cotton thread, weighing no less than 0.75 pound/square yard. [Note: where side-slopes exceed 4:1, use S150].
- (3) Erosion Control Strand equal to "Landglas" as manufactured by Owens-Corning Fiberglas—a strand for erosion control formed from continuous fibers drawn from molten glass, gathered together to form bundles, then wound into tubeless packages, then applied by a special applicator gun or a standard mechanized straw mulcher unit. The glass fibers are tacked to the ground with an asphalt emulsion, AC or other approved tack coating. [Note: Approval of this system is contingent on prevention of tack residue from entering surface runoff drainage systems.]
- (4) Jute mesh equal to "Soil Saver" as manufactured by Jim Walls Company—a heavy jute mesh of a uniform open plain weave of unbleached single jute yarn averaging 130 pounds per 14,400 yard spindle. The yarn shall be of a loosely twisted construction having an average twist of not less than 1.6 turns per inch.
- (5) Other materials as approved for use by Section 720 and 1018.24 of the DOTD Standard Specifications for Roads and Bridges, 2016 edition, latest revision.

B. Seeding and Fertilizing—conforming to LaDOTD Standard Specifications Section 1018.16, 1018.17, and 1018.18.

The work shall be performed in accordance with applicable sections of the LaDOTD Standard Specifications, in particular, Sections 717 and 718.

After ground preparation, all seed and fertilizer shall be distributed by using the Hydro-seeder Method. The Hydro-seeder shall have the capacity to hold at least one-half acre of material for distribution. Hydro-seeder shall be mobile, with discharge capabilities of evenly spreading material at least 75' from the machine. The Hydro-seeder shall have at least a 1,200 gallon water capacity in order to hold the materials required to cover the 0.5 acre.

Immediately after seeding and fertilizing have been completed on the slopes, the entire area shall be covered properly with the approved erosion control blanket.

In the event that rain should occur and cause erosion, the affected area shall be re-disked, harrowed, and seeded again prior to placement of the erosion control blanket.

All seeded and sodded areas shall be watered in order to establish seed germination and continue the promotional growth of grasses. Seeded areas shall receive approximately one inch (1.0") of water per week, either by rain or mechanically applied water applied by the CONTRACTOR.

All seeded, fertilized, and sodded areas shall be guaranteed to establish a full turf of permanent grass that will prevent erosion of any kind. If for any reason erosion occurs during the guarantee period, the CONTRACTOR shall be responsible for filling, grading, seeding, and/or sodding to the satisfaction of the Engineer.

The Warranty (Guarantee) period shall commence upon Acceptance of the Work (approval of 90% payment), and expire ninety (90) calendar days after the recorded "Acceptance of Work".

20—LAYOUT OF THE WORK

The CONTRACTOR shall lay out his work as directed by the ENGINEER and shall be responsible for all measurements in connection therewith. The CONTRACTOR shall, at his own expense, furnish all stakes, templates, platforms equipment and labor that may be required in setting and cutting, or laying out of any part of the work. The CONTRACTOR will be held responsible for the proper execution of the work as may be established or indicated by the ENGINEER and all stakes or other marks thus established shall be preserved by him until their removal is authorized by the ENGINEER.

The CONTRACTOR prepare a "Construction Staging Plan", which plan shall include the CONTRACTOR's procedure for safety, barricading, after-hours equipment and materials storage, and similar features. The CONTRACTOR shall attempt to confine his operations to the schedule and plan approved. Changes in the "Construction Staging Plan" shall be requested from the CONTRACTOR to the Engineer, and approved by the Engineer, prior to implementing any changes.

21—TOOLS, PLANT AND EQUIPMENT

If, at any time before the commencement or during the progress of the work, tools, plant or equipment appear to the Engineer to be insufficient, inefficient, or inappropriate to secure the quality of work required or the proper rate of progress, the Engineer may order the CONTRACTOR to increase his efficiency, to improve his character, to augment his number, or to substitute new tools, plant or equipment, as the case may be, and the CONTRACTOR must conform to such order; but, the failure of the Engineer to demand such increase of efficiency, number of improvements, shall not relieve the CONTRACTOR of his obligation to secure the quality of work and the rate of progress necessary to complete the work within the time required by this contract to the satisfaction of the Owner.

22—MATERIALS, APPLIANCES, EMPLOYEES

Unless otherwise stipulated, the CONTRACTOR shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work. The CONTRACTOR shall at all times enforce strict discipline and maintain good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

In lieu of a job-site telephone, a cellular telephone may be used (at CONTRACTOR's option); however, the cellular telephone shall be readily and constantly accessible (without exception) to the Engineer, the Owner, all subCONTRACTORS, material suppliers, and others who may have a need to immediately contact the CONTRACTOR during the project, including normal working hours and "after-hours" times.

23—DRINKING WATER AND SANITARY FACILITIES

The CONTRACTOR shall provide safe drinking water for his workmen during the construction period. The water shall be delivered through a spigot, angle jet fountain or other approved device. Common drinking cups will be prohibited. The CONTRACTOR shall furnish adequate sanitary facilities for workmen in the work area during the construction period.

24—ACCIDENTS

The CONTRACTOR shall provide, at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work.

The CONTRACTOR must promptly report, in writing, to the Engineer, all accidents resulting from, or in connection with, the performance of the work, whether on, or adjacent to, the site, which caused death, personal injury or property damages, giving full details and statements of witnesses. In addition, if death or

serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger or both to the Engineer and the Owner.

If any claim is made by anyone against the CONTRACTOR or any subCONTRACTOR on account of any accident, the CONTRACTOR shall promptly report the facts in writing to the Engineer, giving full details.

25—DISCREPANCIES

If the CONTRACTOR, in the course of the work, finds any discrepancy between the drawings and the physical conditions of the locality, or any errors or omissions in the drawings or in the layout as given by points and instructions, it shall be his duty to immediately inform the Engineer, in writing, and the Engineer shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the CONTRACTOR's risk. Neither party shall employ or hire any employees of the other party without his consent.

26—INSPECTIONS

All work done shall at all times be subject to the inspection and approval of the Engineer or his authorized representatives. The CONTRACTOR shall notify the Engineer of any work in progress which is subject to his inspection.

Inspectors may be appointed by the Engineer or the owner whose duty it shall be to see that the work is done properly and in accordance with the Plans and Specifications. Inspectors shall have authority subject to the final decisions of the Engineers, to condemn and reject any defective work and to suspend the work when the same is not being done properly.

Inspectors shall have no authority to permit any deviation from the Plans and Specifications except on verbal or written order from the Engineer, and the CONTRACTOR will be liable for any deviation except on such Engineer's order.

All condemned work shall be promptly taken out and replaced by satisfactory work. Should the CONTRACTOR fail or refuse to comply with instructions, in this respect, the Owner may, upon certification by the Engineer, withhold payment or proceed to terminate the Contract as herein provided.

Any defective work may be rejected by the ENGINEER at any time before (or concurrent with) final acceptance of the work, even though the same may have been previously approved through an estimate for payment.

If any work should be covered without the approval or consent of the ENGINEER, it must, if so ordered, be uncovered by the CONTRACTOR. If such work is found to be in accordance with the Contract Documents, the OWNER shall pay for the cost of a re-examination and replacement. If such work is found not to be in accordance with the Contract Documents, the CONTRACTOR shall pay all re-examination costs along with corrective costs, unless the CONTRACTOR shows that the defect in the work was caused by another, and in that event the OWNER shall pay such costs.

TECHNICAL SPECIFICATIONS

MISCELLANEOUS CLEARING, SITEWORK & EROSION CONTROL

1—SCOPE OF WORK

The scope of work contained under this section of the Technical Specifications shall be fully included under the “per each” price bid for items “2. Miscellaneous Clearing & Sitework – Construction/Traffic Signage” and “3. Install Maintain SWPPP/Erosion Control”.

The work includes generally clearing of vegetative matter and other debris and obstacles to accommodate the installation of the facilities on or near the project and on or near adjoining public right-of-ways, the erection and maintenance of construction signs, barricades, and flagmen, erection and maintenance of erosion control measures (including the SWMPP), and specific tasks not associated with other bid items.

Refer to these Technical Specifications entitled “General Construction”, article “18 – Erosion Control” for further requirements regarding erosion control.

2—WORK REQUIREMENTS

All foreign debris and unsuitable excavated and cleared materials shall be completely removed from the site at the Contractor's expense, and adequate and safe working conditions maintained throughout the construction process.

The Contractor shall carefully review the scope and nature of the work required to adequately perform the miscellaneous sitework required under “2. Miscellaneous Clearing & Sitework – Construction/Traffic Signage” and “3. Install Maintain SWPPP/Erosion Control”.

Suitable backfill material may be stockpiled on site with the following conditions:

- a) That the stockpile be prevented from washing into the adjacent drainage structures, ditches and roadways.
- b) That the material stockpiled be suitable for backfilling and compaction as backfill over the new force mains and related structures.
- c) That should stockpiled material be suitable for backfill, then no additional costs will be incurred by the Owner for the use of such suitable materials, and all specifications on material and compaction requirements remain in force. Moreover, the compensation to the Contractor shall be the costs saved by eliminating transportation/handling costs.
- d) That upon Final Acceptance, all remaining material be hauled from the site by the Contractor, or otherwise spread, graded, and/or wasted in the project vicinity as approved by the Engineer.

3—TREE AND STUMP REMOVAL

There appear to be and should be reasonably assumed to be several trees, treetops, and similar large natural obstructions to the work along the project. Where a tree/stump is encountered and removal necessary, the Contractor shall exercise care and caution in removing trees and stumps to the extent that overhead utilities, adjacent pavements, shrubs, and any and all other potentially affected physical fixtures be adequately protected from harm, damage, or inconvenience during and subsequent to the removal process.

"Stump grinding" will be permitted, provided that the depth and extent of stump removal is performed, and all resultant sawdust and chips be removed from the void prior to backfilling.

SPACE INTENTIONALLY LEFT BLANK

4—SPECIAL MISCELLANEOUS CLEARING & SITEWORK REQUIREMENTS

Certain unusual or special tasks have been identified to be performed under this contract and said special requirements shall be included in the “per EACH” price bid for item “2. Miscellaneous Clearing & Sitework – Construction/Traffic Signage” and “3. Install Maintain SWPPP/Erosion Control”, including the following:

4.1 - “2. Miscellaneous Clearing & Sitework – Construction/Traffic Signage” & “3. Install Maintain SWPPP/Erosion Control”:

- 1) Clearing at all project locations and force main installation areas scheduled for boring or open cut in order to construct/complete this contract.
- 2) Extraordinary utility conflict resolution to include hand tunneling, hand excavation, etc. on nearby gas, fiber optic, and/or water lines, as encountered.
- 3) Sawcutting of all existing pavements adjoining new pavements(as need arises and/or as required)
- 4) Provide for all-weather access of construction equipment and hauling equipment.
- 5) Coordinate sanitary sewer/force main piping (new and existing) tie-ins to and from all lift stations with Owner.
- 6) Install and maintain signs and barricades in accordance with LaDOTD permits.
- 7) Special work as shown on the drawings or reasonably implied and not otherwise included in other bid items.

5—EROSION CONTROL REQUIREMENTS

Certain tasks required to be performed under this contract are enumerated in article “18 – Erosion Control” of the “General Construction” specifications, and shall be included in the “per EACH” price bid for item “3. Install Maintain SWPPP/Erosion Control”, including, but not limited to, the following:

- 1) Prepare and submit to LaDEQ a SWMPP; obtain LaDEQ approval and comply with approved SWMPP.
- 2) Install & maintain suitable erosion control measures to generally include perimeter erosion/silt fencing, hay bales and/or rock dams (to prevent surface runoff from conveying excess sediment away from the work site), and other BMP measures incorporated by the Contractor to comply with the Contractor’s Stormwater Management & Prevention Plan.
- 3) Submit to the Engineer the LaDEQ approved SWMPP, as well as periodic reports required by LaDEQ
- 4) Upon completion of the project, seed and fertilize all areas impacted by excavation and other construction activities (RE: Technical Specs, General Construction, Art. 19).

6—MEASUREMENT AND PAYMENT

Measurement and payment of items “2. Miscellaneous Clearing & Sitework – Construction/Traffic Signage” and “3. Install Maintain SWPPP/Erosion Control” shall be measured and paid for at the “per EACH” price as bid, and shall represent all costs associated with clearing, selective clearing, erosion control measures, access, materials, special requirements, reports, barricades, signage, equipment, transportation, overhead, labor, and compliance with local regulations governing construction projects on public property, as accepted in place by the ENGINEER.

TECHNICAL SPECIFICATIONS

MOBILIZATION

1—DESCRIPTION

This work consists of preparatory work and operations, including those necessary for movement of personnel, equipment, supplies, and incidentals to the project site; the establishment of offices, buildings, and other facilities necessary for work on the project; the cost of bonds and required insurance; and other preconstruction expenses necessary for the start of the work, excluding the cost of construction materials.

2—SPECIFIC CONDITIONS

The CONTRACTOR shall include in this bid item all costs associated with the safe and convenient access to the working sites, with the requirement that all work must be accomplished from within the existing road right-of-ways, servitudes, easements, etc. To the extent that physical evidence and/or previously surveyed property corners are available, the Contractor may use as a "rule of thumb" the extent of available right-of-way from back of existing ditch to back of existing ditch, where applicable. It is the sole responsibility of the Contractor to ascertain accurate property lines and corners to ensure that no work is done, nor damage caused to adjacent private properties.

Included in the per EACH price as bid for "Mobilization" shall be all costs associated with obtaining, maintaining, and restoring property and/or improvements to their existing condition prior to the WORK, unless otherwise specified by the work schedule.

2—BASIS OF PAYMENT

Payment will be made at the contract unit price for bid item "1. Mobilization", subject to the following provisions:

Percent of Total Contract Earned	Allowable Percent of the "1 EACH" Price
1 st Partial Estimate	25%
10%	50%
25%	75%
50%	100%

No price adjustments will be made for this item due to changes in the work. Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the contract.

Under no circumstances shall the price bid "per EACH" for "Mobilization" exceed ten percent (10%) of the Total amount bid.

TECHNICAL SPECIFICATIONS

EXCAVATION AND EMBANKMENT HAULED-IN BACKFILL

1—GENERAL

This work consists of excavation, disposal, placement, and compaction of all materials not provided for under other sections of these specifications, including excavation of existing material (on-site) for re-use, excavation and embankment for general site grading, excavation for embankment of subbase as backfill for timber bulkheads, under roadways and building foundation(s), other grading operations necessary for the work in accordance with these specifications and in conformity with the lines, grades, thicknesses, an typical cross-sections shown on the plans or established in the field by the Engineer. Additional material required to complete the following portions of the work shall be compensated as follows:

- (1) All locations: any and all additional material necessary to backfill in excess of suitable material available on-site, shall be paid at the price bid for item "4. Haul-in/grade/compact BACKFILL (vehicular measure); per cubic yard."

2—MATERIALS

Hauled-in fill shall be clayey soils (unless otherwise noted) conforming to ASTM D2487-69, latest revision, CL material for pavement base material. Hauled-in fill for final grade (landscaping) shall be topsoil free of rocks, bricks, concrete debris, clay balls or other deleterious material not suitable for future landscaping.

PAVEMENT BACKFILL material shall be placed on site and either dried or moistened to get the moisture content within 2% of its optimum. The material shall then be compacted by sheepsfoot roller, vibratory roller, pneumatic tamper, or other suitable compaction equipment with sufficient mass to compact the material to **90% OF ITS STANDARD PROCTOR DENSITY**, except in locations to receive pavement, in which case the top 12" of backfill material shall be compacted to **95% of its Standard Proctor Density**.

TOPSOIL BACKFILL material shall be placed on site and lightly compacted, hand graded or otherwise fine graded to promote positive surface drainage to the nearest drainage appurtenance, without ponding or directing surface runoff to an area subject to ponding.

3—COMPACTION AND MAINTENANCE

Lifts for compaction shall not exceed 12" in thickness. The contractor shall also employ equipment to seal off compaction of lifts at the close of a day's work so that overnight rains will not saturate the soil and delay the work or undermine the substrata.

4—TESTING LABORATORY REQUIREMENTS

A soil testing laboratory, approved by the Engineer, shall be employed and paid by the **CONTRACTOR** to conduct tests as directed by the Engineer as follows:

- (a) Borrow material classification
- (b) In-place density tests (one per 50 SY of surface area)

Reports shall be forwarded to the Engineer and approved prior to processing of payments.

5—HAUL TICKETS

Hauled-in fill shall be verified by an approved representative of the Owner, with tickets initialed by the representative. The following information shall be included on each haul ticket:

- (1) Pit location
- (2) Date and time of loading/delivery
- (3) Hauler
- (4) Cubic yards of material loaded/delivered
- (5) Type of material
- (6) Serialized/consecutive load number

One copy of each haul ticket shall be retained by the Contractor, completed, for submission with the appropriate partial payment estimate.

6—QUANTITIES

THE CONTRACTOR shall pay special attention to the provisions of these specifications wherein a smaller or greater quantity of hauled-in fill may be approved, in which case the appropriate change order will be processed.

The Engineer shall be the sole and final judge of the suitability of the sub-base. The Engineer reserves the right and authority to require the CONTRACTOR to exercise increasing degree(s) of care to facilitate the processing of the hauled-in material, at no additional cost to the Owner.

7—MEASUREMENT AND PAYMENT

Measurement and payment for backfill (including topsoil and clean sand for misc. grading) shall be by the unit price as bid for Bid item "4. Haul in/grade/compact BACKFILL (vehicular measure); PER CUBIC YARD", taken from the point of unloading, spread, transported, moistened (or dried), compacted, tested, and otherwise shaped and worked to the required thickness, cross-section, elevation, grade, and compactness, as accepted in the field by the Engineer and verified by the testing laboratory reports.

Hauled in material to be paid for under this item of work shall not exceed in quantity the total quantity specified under Bid Item "4." without specific prior approval of the Engineer.

TECHNICAL SPECIFICATIONS

LIMESTONE

1—GENERAL

The work included by this section of the specifications includes the hauling in, spreading, grading, and compaction of limestone aggregates of various thicknesses and widths to provide for suitable working surfaces and finished surfaces at locations previously aggregate, or surfaces to receive final concrete paving work, roadway subbase, pipe bedding (where directed), as well as entrance roadways/driveways, and in other location as shown on construction plans and details, and as directed by the Engineer.

2—MATERIALS

The stone to be used shall be as noted on the plans or as detailed in these specifications, but shall be approved by the LA DOTD, LA Dept. of Agriculture, US Army Corps of Engineers, and ASCS meeting the following specific gradation requirements:

Type #610 Limestone

Sieve Size	Percent Passing
1 1/2"	100
1"	90 – 100
3/4"	70 – 95
3/8"	50 – 80
#4	35 – 65
#10	25 – 50
#40	10 – 26
#200	4 – 12

Type #57 Limestone

Sieve Size	Percent Passing
1"	90 – 100
1/2"	70 – 95
#4	0 – 10
#8	0-5

55# Limestone Rip-Rap

Stone Size	Percent Passing
275#	100
110#	42 – 100
55#	15 – 50
20#	0 – 15

Should the actual gradation of the delivered limestone fall near the coarser of gradation limits, the Engineer reserves the option of ordering finer limestone gradation to meet proper gradation at no additional cost to the owner. **RECYCLED PORTLAND CEMENT CONCRETE MAY NOT BE USED AS AN EQUIVALENT FOR 55# LIMESTONE RIP-RAP.** The limestone shall not disintegrate or easily break apart from handling. Limestone shall be free of earth and other foreign materials. Each shipment of riprap shall be reasonably well graded within the above specified limits.

~~GEOTEXTILE FABRIC:— Include a fabric underlay for all 55# limestone rip rap. The material shall be a six ounce (6 oz.), non-woven geotextile fabric. Measurement and payment for geotextile fabric shall be included in unit price bid for item “###. Haul-in/grade Limestone (55#, 24” thick); per SQUARE YARD”.~~

~~Geotextile fabric shall have eighteen-inch (18”) lap splices at fabric overlays. Any damaged fabric shall be removed and repaired to ensure continuity of fabric.—~~

3—WORKMANSHIP

The preparation of subgrade to receive aggregate shall be as specified under the plans and details, and accomplished prior to limestone application, included in the unit price bid for the particular paving work being accomplished (RE: Technical Specifications “General Construction” articles “10”, “11”, and “12”).

The limestone shall be deposited directly on the subgrade from hauling vehicles or spreading equipment. No aggregate shall be placed on a muddy or rutted subgrade.

The aggregate shall be shaped by suitable equipment while being compacted. Any ruts formed shall be filled by blading as often as necessary to prevent breaking through the wearing course into the subgrade. Holes, waves, and deficiencies in thickness which develop and are not filled shall be filled by adding more material.

Stockpiled gravel, (if any), reasonably free from debris and clay balls, shall be worked into the finished wearing course for a smooth, crowned, even surface. It is the intent of the Owner that any existing gravel be reclaimed to the maximum extent possible, fully removing stockpiled gravel from the shoulders. The designated thickness of limestone indicated on the construction plans for each application is to be used as a guide. Unless authorized by the Engineer, the Contractor shall NOT haul in quantities of limestone exceeding the scheduled quantity.

4—TESTING REQUIREMENTS

The Contractor shall include in the unit price bid for Bid Item "5. Haul-in/grade/compact LIMESTONE (610/#57) (vehicular measure), per TON the costs of supplying sufficient random samples to be tested at the Owner's expense, to include as a minimum one (1) gradation test for the hauled-in limestone. The Engineer reserves the right to order additional tests at no additional cost to the Owner, if in the judgment of the Engineer, a load or loads of material appears suspect (e.g., existence of clay balls, exceedingly large or small stone).

5—MEASUREMENT AND PAYMENT

Bid Item “5. Haul-in/grade/compact LIMESTONE (610/#57) (vehicular measure), per TON” shall be measured by the truck, properly ticketed, dated, tested, and documented, and paid for at the unit price bid for their respective item rounded to the nearest 0.1 ton (1.0 Ton = 2,000 pounds), which compensation shall be complete and include all plant, labor, materials, equipment, transportation, samples, incidentals, mixing, and all associated work necessary to complete this item of work as specified herein.

TECHNICAL SPECIFICATIONS

PC CONCRETE

1—GENERAL

This work consists of constructing Portland cement (PC) concrete pavement and structures, with required reinforcement, on a prepared subgrade in accordance with these specifications and in conformity with the lines, grades, thicknesses and typical cross sections shown on the plans or established in the field by the Engineer.

For all other cast-in-place PC Concrete paving work, streets, sidewalks, curbs, driveways, shoulders, the requirements of this section of the specifications shall be met or exceeded. The Contractor shall pay particular attention to the types of pavement referred to on the Standard Details Sheet of the plans and on the Bid Proposal Form.

Removal of materials below grade in order to accommodate the new PC Concrete placement shall be included in the unit price bid for the appropriate item of work. **Sawcut of pavements removed/replaced is requirement.** Where formwork is not necessary or practical, the earth/existing pavement shall be squared off vertically and shall be free of loose and protruding material. The base shall be dry, smooth, and hand graded where necessary to insure a full-depth thickness not less than that specified. If over-excavation is necessary to remove loose and/or soft base, an appropriate backfill designated by the engineer shall be added, properly graded, which cost shall be included in the unit price bid for the appropriate item of work.

Quality control requirements shall be as specified in the latest edition of the Louisiana Department of Transportation and Development (LaDOTD) publication entitled "Application of Quality Control Specifications for Portland Cement Concrete Pavement and Structures."

2—MATERIALS

Materials shall conform to the following section(s) of the "Louisiana Standard Specifications for Roads and Bridges" published by the Louisiana DOTD, Office of Highways, Baton Rouge, latest edition (LaDOTD Standard Specifications):

Portland Cement Concrete Pavement	601
Flowable Fill	710
Portland Cement Concrete	901
Joint Materials	1005
Mesh Reinforcement	1009.01
Load Transmission Devices	1009.04
Curing Materials & Admixtures	1011

CLASS OR TYPE OF CONCRETE—Class A amended or clarified as follows (See Table 1 of LaDOTD Standard Specifications Section 901):

- a. Grade of Coarse Aggregate—A
- b. Non-vibrated slump—not acceptable
- c. Minimum bags of Cement per CY of concrete—**6.0**.
- d. Average Compressive Strength at 28 days—**4,000 psi**, with deviations of not more than 5%.
- e. **"High Early"** concrete/admixtures shall be included in all areas.
- f. **"High Early"** shall be considered adequate/ready for traffic following a minimum compressive strength of 80% of design strength (3,200 psi), typically after three (3) days of curing.

3—AMENDMENTS/CLARIFICATIONS TO LaDOTD STANDARD SPECIFICATIONS

The following amendments and clarifications to the DOTD Standard Specifications, in particular, the sections cited in Article 2 above, shall be observed during this project:

[Note: In addition to the specified requirements of Article 2 above]

a. Testing— All concrete placed in excess of fifty square yards (50 SY) shall be sampled with four (4) cylinders: two (2) to be tested for 7 day breaking strength, and two (2) to be tested for 28 day breaking strength. Each 50 SY of patching shall be represented by testing laboratory reports, to be provided to the Engineer for review, **AT THE EXPENSE OF THE OWNER**. The Engineer reserves the right and authority to order additional testing at the Contractor's expense, if in the Engineer's opinion the concrete work is suspect. Should the additional test prove deficient, then the cost of additional testing (and coring if necessary) shall be at the expense of the Contractor. If a test fails, subsequent testing (and coring, if required by the Engineer), shall be at the Contractor's expense, including corrective measures, if a deficiency is substantiated by testing laboratory reports and if determined by the Engineer that corrective work is necessary.

b. Section 601 "Portland Cement Concrete Pavement"--

- (1) Built up forms are approved (not exceeding 2").
- (2) In addition to compaction of the existing roadbed, allow for 4" thick clean which shall be installed to adjust the final grade(s). It shall be placed and compacted as shown or otherwise specified, and included in the lump sum price bid for the roadway being replaced.
- (3) The subgrade shall be uniformly moistened immediately prior to concrete placement, unless specifically waived by the Engineer.
- (4) Split slab construction is approved.
- (5) Hand finishing is permitted.
- (6) Broom or broom finish is permitted (Contractor's option).
- (7) The pavement shall not be opened to traffic until standard test specimens have attained design strength, or until 14 days after placement, whichever is longer. An exception to this requirement may be made by the Engineer provided the Contractor utilizes high-early concrete mix design, in which case the pavement may be opened for traffic within five (5) days.
- (8) Proper signage shall be placed to control traffic and restrict loading of the "green" pavements.
- (9) A "Lot" shall be defined as the entire project length.
- (10) The Measurement and Payment subsections, as well as the Price Adjustment Schedule (LaDOTD Table 1 of Section 601), shall be utilized.

c. Section 901 "Portland Cement Concrete"--

- (1) Mixing at the site is not permitted.
- (2) Disregard Table 2 of Section 901.
- (3) Disregard the requirement for a qualified Concrete Technician at the plant; however, the contractor shall be responsible for quality control of materials during handling, blending, mixing, and pouring operations, and additional quality control requirements as set forth Article 1 this section.
- (4) No mix design is necessary to be submitted to the Engineer for approval; moreover, it is the responsibility of the Contractor to ensure that the concrete mix conforms with the requirements of these specifications.

d. Section 1005 "Joint Materials for Pavements and Structures"--

- (1) Wood fillers shall be clear heart redwood.
- (2) No board shall be less than ten (10') feet long, unless the slab section is less than ten (10'), in which case the board must be placed in one continuous length.

e. Section 1009 "Reinforcing Steel and Wire Rope"

No changes

f. Section 1011 "Concrete Curing Materials, Special Finishes and Admixtures"

No changes

4—FLOWABLE FILL

4.1 - GENERAL—In certain circumstances, normal backfill/compaction of excavated areas with earthen backfill may be impractical, or may compromise the integrity of the surrounding undisturbed areas. In such cases, at the sole discretion of the Engineer, Flowable fill may be required in order to expedite the backfill process and/or to minimize disturbance of surrounding undisturbed overburden.

4.2 – DESCRIPTION—Furnish, place, and consolidate a controlled low strength flowable fill as an alternative to compacted soil. Applications for this material include, but are not limited to, general backfilling of drainage structures, entrenchments across pavements, encasements, beddings, void filling, and other uses as shown on the plans or as approved by the engineer. The flowable fill shall be a cementitious mixture of Portland cement, fly ash (depending on application and mix design), fine aggregate, water, entrained air, and appropriate admixtures for the particular application.

4.3 – MATERIALS—Flowable Fill materials shall comply with the following LaDOTD Standard Specifications sections and subsections:

Portland Cement	1001.01
Fine Aggregate	1003.08.1
Admixtures	1011.02
Water	1018.01
Fly Ash	1001.04

Design and proportion flowable fill in accordance with LaDOTD Standard Specifications Table 710-1 (see below).

Trial batching will be required for excavatable and non-excavatable mixes to ensure appropriate job mix consistency and adherence to Table 710-1 properties.

Use excavatable fill unless noted otherwise on the plans.

TABLE 710-1 – FLOWABLE FILL MIX DESIGN¹

Material	Excavatable	Non-Excavatable
Portland Cement	75 – 100 lb/cubic yard	75 – 150 lb/cubic yard
Fly Ash	0 – 150 lb/cubic yard	150 – 600 lb/cubic yard
Water ²	--	--
Air ³	10 – 35%	5 – 20%
Concrete Sand	Proportioned to yield 1 cu.yd.	Proportioned to yield 1 cu.yd.
Unit Weight (wet) ³	90 – 110 lb/cu.ft.	100 – 125 lb/cu.ft.
28-day compressive strength ³	Maximum 100 psi	Minimum 125 psi

¹ Mix designs shall yield 1.0 cubic yard absolute volume.

² Mix designs shall produce a consistency that will result in a flowable self-leveling product at the time of placement and conform to the requirements of 710.02.

³ The requirements for percent air, compressive strength and unit weight are for laboratory designs only and are not intended for jobsite acceptance requirements unless otherwise directed by the project engineer. For early opening to traffic and expedited placement circumstances, the maximum or minimum required strength shall be attained in the desired time frame.

4.4 – CONSTRUCTION REQUIREMENTS—Before placement, provide temporary end dams or soil berms as directed by the engineer to confine the flowable fill. Place flowable fill to the lines and grades shown on the plans or as directed.

Where flotation or misalignment may occur due to hydrostatic pressure, assure correct alignment and placement of the encased structure by using straps, soil anchors, or other approved means of restraint.

Protect flowable fill from freezing for 36 hours after placement.

Place flowable fill by chute, pumping or other methods approved by the engineer. Due to flowable fill's liquid condition, take into account the hydrostatic pressure on adjacent structures on deep fills where multiple lifts may be required. While in a liquid state, flowable fill in deep excavations is in a quick condition, and shall be protected until hardening occurs.

For early opening to traffic and expedited placement circumstances, perform trial batches to verify compressive strength for the required time frame before placing under load. Flowable fill will not require field sampling or testing other than the approved trial batch mix design, unless otherwise directed by the project engineer.

5—MEASUREMENT AND PAYMENT

All concrete paving shall be paid for, unless noted below, by appropriate unit price bid item as measured, tested, and accepted by the Engineer. Payment shall constitute all labor, materials, transportation, incidentals necessary or reasonably implied to remove existing pavements as marked in the field or otherwise implied in the prosecution of the construction activities, compaction of existing base, hauling in and compacting (if required) additional base material, removal of loose materials and debris from failure, forming, pouring, and finishing of the PC Concrete. A "square yard" shall be measured by the projected area of the completed pavement in square feet, divided by nine (9) to achieve the total quantity of "square yards". The finished pavement area in square yards shall be rounded to the nearest 0.1 of a square yard for pay purposes.

Note: Sawcutting of pavements removed/replaced is a requirement, which costs shall be included in the unit price bid for item "2."

"6. Flowable Fill; per CUBIC YARD":

Measurement: Cubic Yard based on vehicular measure delivered and deposited where directed.

The contract unit, "PER CUBIC YARD" shall be defined as the volume in cubic feet divided by 27.0 Cubic Feet. per Cubic Yard.

All remaining P. C. Concrete paving work, including manhole bases and tops, SS Cleanout pads, wet well bases and tops, lift station bases and tops, electrical pads, valve pads, force main by-pass pads, and similar work, such as catch basin boxes and items which are otherwise included in other pay items, shall be excluded from payment as specific items of concrete paving or cast-in-place concrete work.

Payment shall be for the appropriate bid item unit prices as bid and measured, as approved in the field by the Engineer and certified by independent testing laboratory results, including reinforcement, joint materials, forming, finishing, excavation, P. C. Concrete materials, vibrating operations, and associated work, in strict conformance with the plans, details, and specifications.

TECHNICAL SPECIFICATIONS

SANITARY SEWERAGE LIFT STATION

HAEIDD – Hammond LS #51

(Dry-pit Submersible Chopper Pump Type)

1—GENERAL

The CONTRACTOR shall provide supervision and labor to furnish and install all necessary equipment, including piping, valves, electrical, controls, and wet wells as described herein and shown on the plans, including, but not limited to, the following:

A. HAEIDD Lift Station (#51):

1. Two (2) dry-pit submersible chopper sewage pumps operating at 800 GPM @ 60' TDH.
2. Valves and discharge piping/connections to existing discharge within dry pit;
3. Electrical work;
4. Other work necessary to render the LS functional (i.e. start-up, test, adjustment, etc.).

2—PUMPING EQUIPMENT

2.01 - SCOPE: Furnish and install two (2) dry-pit end suction centrifugal chopper type sewage pump(s) per LS site. Each individual pump shall be capable of delivering the following performance points:

2.01.1 HAEIDD Lift Station (#51) (duplex):

A. Operating Conditions:

Eight-hundred gallons per minute at sixty feet Total Dynamic Head (**800 GPM @ 60'TDH**).

B. Horsepower/RPM: 25 HP; 1,150 RPM.

C. Power: 208V/3 phase; 60 Hz electric.

D. Efficiency: 63% (min.) efficiency at operating point.

E. Preferred manufacturer/model:

Barnes Sithe – Model No. 6ESCDK25066; 340 mm dia. Impeller; 63.5% efficiency

All pumps shall be manufactured by the same, single manufacturer/company which shall be regularly engaged in the manufacture and assembly of submersible/chopper units for a minimum of five (5) years. Manufacturer shall be certified to ISO 9001 and shall provide a valid certificate upon request. Pump and motor materials shall consist of the following:

Volute	ASTM A48 Class 30 Cast Iron
Impeller	Standard: ASTM A536, 65-45-12 Ductile Iron Optional: ASTM A532 Class III Type A White Iron
Slicing Blade	ASTM A276 440C Stainless Steel, Heat Treated to 53-60 HRC
Striker Plate	ASTM A276 440C Stainless Steel, Heat Treated to 53-60 HRC
Motor Housing	ASTM A48 Class 35B Cast Iron
Wear Ring	ASTM B505 C95400 Lead Free Bronze
External Hardware	304 Stainless Steel
Lifting Bail	304 Stainless Steel
Shaft	416 Stainless Steel
Cooling Jacket	304 Stainless Steel
Seals	Standard: Carbon/Silicon Carbide/Buna Upper, Silicon Carbide/Silicon Carbide/Buna Lower

Coating	Liquid End: Two coats of Axalta Corlar® amidoamine epoxy, 10 mil minimum thickness, in the manufacturer's standard color Motor Cap: Resicoat® R4 Powder Coat Epoxy, in the manufacturer's standard color
Gaskets	Buna-N
O-Rings	Buna-N
Motor Rotor Bars	Die Cast Aluminum
Motor Cooling Liquid	Monopropylene Glycol and Distilled or Deionized Water
Elastomeric plug holding plate	ASTM A48 Class 30 Cast Iron
Cable Entry Housing	ASTM A48 Class 30 Cast Iron
Nameplate	304 Stainless Steel

2.02 PUMP DESIGN: Each pump shall be capable of handling raw, unscreened domestic sewage consisting of water, fibrous materials, and solids at heavy consistencies. The pump shall be capable of passing a 3" diameter spherical solid without the chopping mechanism. The chopping mechanism shall chop/ macerate solids without clogging with chopped solid size not less than 1 inch, and the chopping mechanism shall be an integral part of the pump. The pump(s) shall be capable of handling liquids with temperatures to 104 degrees F continuous, 160 degrees F intermittent.

2.03 PUMP CONSTRUCTION:

The pump end components will be ASTM A48 Class 30 Cast Iron, aside from the impeller. The volute shall be a single piece non-concentric design, with smooth passages of sufficient size to pass solids that may enter through the impeller. The volute shall include a drain port connection. The volute discharge connection shall be a standard 125 lb. flange, slotted to accommodate ANSI or MM ISO Flanges used in sewage applications, and shall be a centerline connection. The suction connection shall be a standard ANSI 125 lb. flange. The volute shall be designed to withstand 1.5x the maximum shutoff head.

The slicing blade-impeller assembly will be dynamically balanced to ISO G6.3 specifications, and will be capable of handling solids, fibrous materials, and other matter typically found in raw wastewater. The impeller shall be keyed to the shaft and shall have a taper lock connection. The impeller will be a Dual-vane design with pump out vanes on both sides. The matching volute will include a replaceable volute wear ring at the inlet. Larger models shall utilize an impeller wear ring as well.

The open center chopping mechanism shall consist of a stationary striker plate and a rotating slicing blade. Both blades shall be constructed of high quality, ASTM A276 440C stainless steel, heat treated to 53-60 HRC. The slicing blade shall be press fitted on to the impeller suction, and secured with four stainless steel pins. The striker plate shall be fixed to the volute suction, and shall be an ANSI flange design. The clearance between the striker plate and slicing blade shall be adjustable, in order to maintain a clearance of 0.003" to 0.010". The striker plate shall be sealed internally against the volute with an O-ring. This design shall allow for a solids handling pump to be easily upgraded to a chopper pump. Designs that utilize a chopping nut, impeller without a separate slicing mechanism, upper cutters, or that cannot easily upgrade a solids handling pump to a chopper will not be accepted.

The pump and motor shaft will be a solid, continuous piece of 416 stainless steel, keyed and tapered for the matching impeller fit to reduce rotor imbalance and minimize stress risers associated with stepped shafts. Shafts utilizing a coupling or other attachment method will not be acceptable. The shaft will have a maximum allowable deflection of 0.002 inches at the lower mechanical seal during operation.

The mechanical seals will be a tandem system, consisting of two totally independent mechanical seals, each with its own single spring system acting in a common direction. The upper seal will have a carbon rotating face and a silicon carbide stationary face and will be located between the coolant chamber and the motor housing. The lower seal will have a silicon carbide rotating face and a silicon carbide stationary face and will be located between the pump and the lubricant chamber. Both seals will have 300 series stainless

steel hardware and Buna-N elastomers. Alternate seal materials include a silicon carbide/silicon carbide upper seal, tungsten carbide/tungsten carbide upper seal, and tungsten carbide/tungsten carbide lower seal. Combination of these seal configurations will be acceptable. Seal faces with materials other than those specified above will not be acceptable.

Both seals shall be pinned in place to prevent rotation of the stationary seat and shall seal to the pump housing and must operate in a coolant chamber which shall provide superior heat transfer & seal cooling. The coolant must be environmentally safe non-toxic material. The seals must not require routine maintenance or adjustment but should be easily replaced. The seal shall be commercially available and not a pump manufacturer's proprietary design. Double mechanical seals with a single or double spring and/or cartridge seals will not be accepted.

The common pump and motor shaft shall rotate on two bearings. These bearings shall be high quality and commercially available. The bearings will be sealed, permanently grease lubricated for superior lubrication, cooling, and life. The lower bearing shall be of the double row ball type, locked in position to accept radial and axial thrust loads and the upper bearing shall be of the pre-loaded single ball type for radial loads as needed to provide a minimum L10 Life of 50,000 hours at -50% to +50% of BEP.

Gaskets except for seal gland and bearing retainer shall be of the angular gland compression O-ring type eliminating critical slip fits and the possibility of damage during service associated with sliding O-ring sealing arrangements. Mating surfaces where watertight sealing is required shall be machined and fitted with O-rings. The exterior of the pump liquid end will be coated with two coats Axalta Corlar ® two-part amidoamine epoxy, with a minimum thickness of 10 mils. The motor cap will be powder coated with Resicoat ® R4 epoxy. Coating of the pump interior to gain hydraulic efficiency will not be accepted.

The pump shall be equipped with a stainless-steel nameplate, located in an easily accessible location. The following data will be included on the nameplate:

- a. Manufacturer's Name
- b. Pump Part Number, Model Number and Serial Number
- c. Motor Horsepower Rating
- d. Voltage, Phase and Frequency
- e. Motor Speed
- f. Motor Service Factor
- g. Motor Full Load Amps
- h. Ambient Temperature Rating
- i. Code Letter
- j. Pump Weight
- k. Impeller Diameter
- l. Motor Insulation Class

2.03 MOTOR CONSTRUCTION:

The major driver components will be ASTM A48 Class 35B Cast Iron. The motor shall be a squirrel cage induction motor housed in an air filled, watertight enclosure. The motor shall be NEMA Type B. The stator windings shall be insulated with moisture resistant Class H insulation, rated for 180°C (356°F). The motor shall be 208 volts, 60 Hz, 3 phase, and shall have a voltage tolerance of +/- 10% from nominal voltage. The motor shall be designed to run continuously in a 40° (104°F) ambient environment.

The stator shall be press fit into the motor housing, for mechanical stability and optimal heat transfer. The use of bolts or pins to secure the stator into the housing will not be acceptable.

The motor shall be inverter duty rated, in accordance with NEMA MG-1, Part 31, and shall have a minimum 1.15 service factor. The motor shall be designed for usage in submersible or dry applications, where the motor shall operate fully submerged, partially submerged, or completely unsubmerged. The motor shall continue to operate satisfactorily should the dry pit flood. The motor horsepower shall be non-overloading throughout the entire pump performance curve.

The rotor bars shall be die cast aluminum with integral cooling fins.

The motor will be capable of operating at a maximum submergence depth of 66 ft (20m), and shall be IP68 protection rated.

The motor will be IE3 rated in accordance with IEC 60034-30 at nominal voltage and frequency, with testing per CSA C390/IEEE114. The motor will be capable of 15 evenly spaced starts per hour without overheating.

The motor shall include a factory installed closed loop cooling system. The cooling system shall be completely self-contained. The cooling liquid shall be a mixture of 30% monopropylene glycol and 70% distilled or deionized water, and shall be circulated between a stainless-steel jacket and the cast iron motor housing by a secondary, independent impeller. This secondary impeller shall be mounted directly to the motor shaft between the mechanical seals. The bearing bracket shall act as a heat exchanger to move the heat from the motor to the coolant liquid. The seal plate shall be finned and act as a heat exchanger to move the heat from the coolant to the pumped media. The system shall have at minimum one fill port and one drain port. An external coolant source, a cooling system circulating the pumped media or a design without a cooling system will not be acceptable.

2.03.01 SENSORS:

A moisture sensor detection system shall be integrated within the bearing bracket and liquid ingress must trigger an alarm before reaching the bearings. A normally open float sensor with a circuit verification resistor must be installed in the seal leakage chamber to detect presence of liquid. Units sensing moisture within the motor chamber are not considered acceptable. It is recommended to use the pump monitor relay (PMR) installed inside the control panel which will trigger a warning light and shuts the pump down due to ingress of liquid.

The 3-phase motor shall be equipped with three (3) thermal sensors, one per phase, shall be embedded in the end coil of the stator windings, and wired in series. These sensors shall be used to monitor stator temperatures, in conjunction with an external motor overload protection device and wired to the control panel through the power cable.

2.03.02 CABLE:

The pump shall be equipment with 30 ft of a CSA qualified submersible power cable constructed in accordance with Type W guidelines. The power cable will also include the moisture and temperature sensor leads in one common jacket for most models.

The E32 frame pumps, the cable entry system will be Barnes Plug & Play design, consisting of a potted cast iron housing, held in place by stainless steel hardware. The power cord shall be easily removed and replaced. Pumps with power cords that cannot be easily removed or replaced will not be acceptable.

The pumps shall be capable of being easily removed and replaced without the removal of the pump power cord from the electrical conduit.

2.03.3 PUMP TEST: The pump manufacturer shall perform a standard three point performance test at the minimum. If certified testing is required, the manufacturer shall offer to perform tests in accordance with Grades B, E and U of Hydraulic Institute standards. Additionally,

- a. A check of the motor voltage and frequency shall be made as shown on the name plate.
- b. A motor and cable insulation test for moisture content or insulation defects shall be made per CSA criteria.
- c. A performance curve from the production line test showing head versus flow shall be included in the Installation and Operation Manual shipped with each pump.
- d. A written report shall be available showing the aforementioned tests have been performed in accordance with the specifications.

2.03.4 START-UP: The pump(s) shall be tested at start-up by a qualified representative of the manufacturer. A start-up report as provided by the manufacturer shall be completed before final acceptance of the pump(s).

3 DOCUMENTATION: The manufacturer, if requested, will supply a minimum of one set of standard submittal data (electronic/e-mailed pdf acceptable);

A. Standard submittal data consist of:

1. Pump Catalog Data, including a certified performance curve, motor data, and pump dimensional drawing
2. Materials of construction list
3. Mounting Accessory details
4. Access Cover data
5. Typical installation drawing
6. Electrical schematics and diagrams
7. Certified copies of test data from factory testing when specified, only after pumps have been ordered and manufactured
8. Descriptive information on material and equipment furnished
9. Anchorage requirements
10. Installation instructions
11. Manufacturer's certificate of acceptance of installation and testing
12. List of manufacturer's recommended spare parts
13. Installation & Operation Manual with parts list
14. Warranty documents
15. Name and address of factory authorized service facility

B. Closeout submittals:

1. Project record documents: Record actual locations of pumps and appurtenances on the contract drawing, reflecting all post-bid changes.
2. Operations and Maintenance Data: Submit maintenance instructions for equipment and accessories.

3-DELIVERY, STORAGE, AND HANDLING

Store materials to permit easy access for inspection and identification. Keep all material off the ground, using pallets, platforms, or other supports. Protect steel members and packaged materials from corrosion and deterioration. All parts shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installation is completed and the unit and equipment are ready for operation

4-INSTALLATION

Contractor shall install in accordance with manufacturer's printed instructions (and state/municipal, and other governing standards).

1. Dry Pit: The pump shall be capable of operating continuously in an unsubmerged condition, in either a vertical or horizontal installation, or
2. Contractor shall complete all piping and supports, make all electrical power and control connections, and install all safety devices and instrumentation prior to equipment start-up.
3. All anchor bolts, nuts, washers, and sleeves shall be Type 316 stainless steel furnished by the contractor and shall be of ample size and strength for the purpose intended
4. For Dry Pit pumps - Vertical Metal Stand: The pump shall be supplied with a vertical mounting accessory, which includes a metal stand, suction elbow with cleanout port, and an adapter plate which allows 360° rotation of the pump discharge. The stand shall be designed to handle the weight of the pump, and the suction elbow shall be designed to withstand 1.5x the maximum shutoff head. Designs that only allow 45° or 90° rotation will not be acceptable.

5—QUALITY CONTROL

A. Factory Tests:

1. The pump manufacturer shall perform a pump performance test to verify hydraulic performance as standard.
2. A hydrostatic test shall be performed on dry pit pumps to verify casting integrity.
3. If certified testing is required, the manufacturer shall offer testing in accordance with Hydraulic Institute Standards 11.6 and 14.6. Additionally, the following tests are also available:
 - a. A check of the motor voltage and frequency
 - b. A motor and cable insulation test for moisture content or insulation defects, in accordance with CSA criteria
 - c. Contact the manufacturer for tests not listed here.
4. Each motor shall be dielectric tested to verify the motor insulation integrity.

B. Manufacturer's Representative

1. Provide manufacturer's representative. The representative shall inspect the equipment, carry out the equipment start-up procedures, and provide training to the operators in how to effectively operate and maintain the equipment. The manufacturer's representative may be an employee of the manufacturer's distributor.
2. Prior to Operational Testing, the CONTRACTOR shall have the manufacturer's representative perform the following:
 - a. Megger test the stator and power cables.
 - b. Check proper rotation.
 - c. Check power supply voltage.
 - d. Measure motor operating load and no-load current.
3. During Final Acceptance Testing, the manufacturer's service representative shall review recommended operation and maintenance procedures with the OWNER'S personnel.
4. The manufacturer's representative shall be present for a period of not less than one (1) day to complete the following:
 - a. Inspect completed installation
 - b. Observe equipment testing
 - c. Observe equipment start-up
 - d. Instruct operational personnel on equipment operation and maintenance.

C. Field Tests:

1. After installation, the pumping system shall be field tested using potable water for a minimum of 30 minutes and check for correct direction of rotation in the presence of the manufacturer's representative and the Engineer. The CONTRACTOR shall be responsible for providing water and for conveying the water to the site and providing required meter and back-flow prevention check valve assembly. Each pump shall be cycled through the sequence of operation "pump on" as the level rises in the wet well and then "pump off" during draw down. Once each pump has been tested separately, the pumps will be operated in parallel.
2. Each pump shall operate over its intended operating range without undue noise, vibration, or cavitation. The CONTRACTOR shall monitor and record vibration at three symmetrically located points on each pump at maximum and minimum speed and supply data to the OWNER.

D. Inspections

1. Upon completion of the installation and on-site testing, and before acceptance by the OWNER, the Pump Manufacturer or the authorized Pump Manufacturer's Representative shall submit a written statement that the pump installation has been inspected and is completed in accordance with the manufacturer's recommendations.

6—WARRANTY

This CONTRACTOR (installer) and the pump manufacturer/control panel manufacturer shall warranty for a period of **TWO (2) years from the date of initial start-up, or thirty months (30) months of shipment**, whichever is shorter, that all equipment is free from defects of workmanship, manufacture, and design. The manufacturer of the pumping equipment shall furnish replacements for all items deemed by the Engineer to have failed under the warranty. Items normally consumed during the operation of the pumping station, such as oil, grease, light bulbs, etc., are not to be included under this warranty. It shall be the Owner's responsibility to return the prospective warranty item to the manufacturer's plant for repair/replacement. *The contractor shall supply the following spare parts:*

- a. one (1) spare full diameter impeller-slicing blade assembly for each pump,
- b. one spare set of mechanical seals,
- c. all gaskets,
- d. all O-Rings,
- e. spare wear rings for each pump.

7—MEASUREMENT AND PAYMENT

Lift station work shall be included in bid item for the respective work item including, but not limited to, clearing & grubbing of the site, excavation and shoring work; well-pointing & dewatering; installation of the complete wet well including limestone subbase; wet well bottom, new concrete wet well structure; wet well top; pumping equipment and accessories installation within the wet well; tie-in of influent gravity sewer line(s); tie-in of pump discharge piping and valve pit piping &; limestone surfacing; and all associated piping, fittings, connections, shoring (as required), de-watering *including well-pointing of the wet well excavation*, start-up and demonstration of operation, operation and maintenance manuals, As-Built drawings, testing report certifications, and other items of work as specified by the Engineer and reasonably implied herein.

Measurement and payment for installation of new Pumping Equipment; i.e., bid items

“11. Install Duplex Submersible Pumping Equipment (800 GPM @ 60’TDH)” shall each be measured and paid as a percentage of completed work as outlined below. The work shall include all plant, labor, materials, freight, and other costs associated with the completion of work indicated on the Construction Plans, and as indicated herein.

Payment shall be based upon the price bid for the following bid items:

Bid item “11.”: Install Duplex Submersible Pumping Equipment; per EACH	
TASK	Percentage of Partial Payment
a. Preparation of site *	0%
b. Delivery of pumping equipment to site	60%
c. Completion of piping manifold/valves	10%
d. Installation of pumping equipment	15%
e. Delivery/Installation of Control Panel	0%
f. Completion of electrical work/controls **	0%
g. Start-up/Demonstration	10%
h. Correction deficiencies/on-line	5%
Total per EACH amount item “11.”:	100%

* Included in item “2. Miscellaneous Clearing & Sitework”.

** Included in item “16. Electrical”.

TECHNICAL SPECIFICATIONS

EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES

1 - GENERAL

Scope: The work covered by this section consists in furnishing all plant labor, equipment, and materials and in performing all operations in connection with excavation and trenching for utilities, including dewatering, shoring, bracing, bedding, backfilling, compacting, protective slabs, restoration of surfaces (paved or otherwise), and disposal of surplus materials, complete in accordance with these specifications and the applicable drawings, and subject to the terms and conditions of the contract.

The Contractor must satisfy himself regarding the character and amount of soils, ground and surface water, and all other materials, and conditions to be encountered in the work to be performed. Submission of a Bid to do the work will be in and of itself, an affirmation that he has done so.

The Contractor shall conform to all State, and Parish laws and regulations. He shall arrange his work to conform to all safety and precautionary measures and requirements of the appropriate Articles of the section of these specifications entitled "GENERAL CONSTRUCTION".

Work of this section will be field tested by an independent testing laboratory. **Costs of earthwork compaction tests will be borne by the OWNER.** Costs for retesting work which fails to meet original test requirements as well as costs to rectify deficient work will be borne by the Contractor.

2 - EXECUTION

Carry all excavations to the line and grade shown on the Plans or as directed by the Engineer. When excavation is carried below or beyond that required, fill the space with selected soil properly compacted or with concrete in accordance with the Engineer's instructions. No claim for additional compensation will be made for such backfilling of excess excavation.

Limit, generally, the length of trench to be excavated ahead of pipe laying to sufficient trench for one day's pipe laying operation. When the word "pipe" is used, it shall be interpreted to include utility installations, such as conduit.

For pressured conduit, generally program pipe-laying to conclude at the point of connection to the pressure source (i.e., "live" water mains, well-head discharge, pressure main, pump discharge manifold, etc.). Adequate provisions shall be made by the Contractor to prevent contamination of the existing appurtenances, through the use of flushing valve(s) or other suitable means. The cost of such flushing mechanisms shall be included in the unit price bid for connecting the new main to the existing main, unless specifically listed as an individual bid item.

Encountering adjacent and/or conflicting utilities: The Contractor shall contact Louisiana One Call no sooner than seven (7) days prior to pipe laying activities in a given area (as determined by Contractor and the Louisiana One Call regulations). *It should be anticipated that utility service lines/connections may not be feasible to locate accurately in the field.* The contractor shall exercise vigilance to avoid cutting and/or damaging utilities. This includes advance surveying of the work vicinity for meter assemblies, disconnect valves, cleanouts, and other appurtenances which could indicate the presence of utilities and service connections in the path of, or adjacent to, the pipe laying activities. The Contractor shall exercise extreme caution in excavation and associated construction activities which could damage and/or cut utilities and service connections along the path of the new pipe line.

In the event that utility services and/or connections are encountered, the Contractor shall ensure that the elevation(s) of the new utility pipe(s) is sufficient to clear the encountered lateral/main/service/etc. In the event that a conflicting service lateral/main is encountered, and the new utility pipe cannot be adjusted to avoid a conflict, the Contractor shall cooperate with the Engineer/Owner in accommodating the conflicting lateral/main/service/etc., utilizing one (1) of the following methods:

- a. If directed by the Engineer, a conflict box shall be constructed per the details, payable at a price to be negotiated between the Contractor and Engineer, and subsequently approved by the Owner (prior to commencing work on subject conflict box);
- b. Where practicable, the Owner may relocate the affected lateral/main/service/etc. The Contractor shall proceed with the work at other locations until after the affected lateral/main is relocated by the Owner. No additional compensation shall be sought by the contractor, nor approved the engineer, for modification(s) to the work and/or work schedule caused by the relocation of a conflicting lateral/main/service/etc.
- c. If the conflict is a water main (4" – 12" diameter), and if directed by the engineer, the contractor shall perform an offset of the conflicting water main, payable based on time and materials incurred by the Contractor.

Should a utility and/or service connection be reasonably anticipated based on the existence of nearby customers and/or meter assemblies, disconnect valves, cleanouts, and other appurtenances, the contractor is responsible for damaged utilities, including those unmarked but reasonably visible.

The Owner will assist the Contractor in anticipating and/or protecting parish water and sewer utilities and/or service connections; however, it remains the contractor's responsibility to minimize damage and/or cutting of utilities and/or service connections.

Finally, the Contractor shall endeavor to seek fulltime assistance of other utilities (e.g., water, natural gas, telephone, cable TV, fiber optic, electrical, et al) to prevent damage and/or cutting of main lines and/or service connections.

Cutting pavement: Cut pavement ahead of the excavation leaving a uniform (**pavement saw-cut required**) edge with minimum disturbance of remaining pavement. Do not mix pavement in pieces of 6 inches or larger with other excavated material, but dispose of such away from the site of the work before the remainder of the excavation is made.

Trench dimensions: the CONTRACTOR shall determine the trench width; however, in no case shall the trench width be so narrow as to jeopardize the safety of workers. Where pipe depth exceeds four feet (4'), the CONTRACTOR **shall** include in the unit price bid for each size and depth of pipe adequate trench protection to include AT A MINIMUM a "trench-box" of suitable size and mobility to afford trench bank stability and protect all parties working within and in the vicinity of the excavation. For storm drains, water mains/service lines, and sewer force mains no greater than 5' in depth, the trench width may be as narrow as the width of the pipe at the joint, plus 6 inches on each side, or as required to facilitate welding/jointing procedures. Under certain circumstances for shallow depth pipe, vertical trench walls are acceptable, if such a trench configuration would pose no threat to adjacent roadways, shoulders, and other obstructions.

Where surrounding conditions permit, the top trench width may be equal to the pipe depth; however, for pipe depths in excess of 4', a "trench-box" remains a requirement.

Where soils and/or groundwater conditions dictate, and a trench box becomes impractical, other means of suitable sheeting and bracing and/or well-pointing may be used, but only if requested by the CONTRACTOR AND APPROVED IN WRITING BY THE ENGINEER, the cost of such sheeting & bracing shall be as negotiated and approved between the Contractor and the Engineer, PER THOUSAND BOARD FEET (MBF).

If a substitute method is requested by the Contractor, or if well-pointing appears to be the only viable alternate to other specified methods, then said substitute method (or well-pointing) shall be approved by the Engineer in advance of undertaking such methods, including a mutually agreed price.

The CONTRACTOR may only seek such extra work when no such sheeting and bracing or well-pointing is required on the plans and details, and when conditions could not have been reasonably anticipated, and only when not directly resulting from the operations of the CONTRACTOR. The ENGINEER reserves the option of allowing for drier weather (by the addition of eligible delay days), and/or widening of the top trench width (to preclude side-slope "sloughing"), and/or further dewatering, to avoid the use of sheeting and bracing (left-in-place) and/or well-pointing. The CONTRACTOR shall include in the unit price bid for the appropriate diameter and depth of pipe the following:

- (1) Trench excavation with top trench width equal to twice the pipe width;
- (2) Dewatering and pumping equipment, including fuel, suction and discharge hoses, and personnel to adequately remove collected and standing water from open trenches (not including well-pointing systems).
- (3) Sufficient manpower and time to accomplish dewatering/trench bank stabilization.

No additional costs shall be allowed for the CONTRACTOR to properly and regularly dewater trenches and other exposed excavations unless in the opinion of the Engineer, timber sheeting and bracing becomes necessary, and/or well-pointing becomes required. In which case a suitable price for the work shall be negotiated between the ENGINEER and the CONTRACTOR.

Shape the pipe bed so that the pipe will be in continuous contact with the bed for its full length and for the bottom ¼ of its circumference. Excavate accurately for joints, fittings, manholes and pump stations with space to install joint couplings or other connecting devices.

- A. Trench grade for utilities or structures not requiring special bedding material is defined as the grade of the bottom surface of the utility or structure to be constructed or placed within the trench. Such shaping of the trench bottom as may be required to provide suitable bedding is considered as part of this work.
- B. Trench grade for utilities in rock is defined as 4 inches below the outside of the bottom of the utility. Backfill the 4 inches with extra utility bedding material.
- C. Backfill to trench grade and suitably compact any excavation done below trench grade in error, without extra cost to the Owner.

Unsuitable material below trench grade: Remove soil unsuitable for proper foundation, encountered at trench grade, for the full width of the trench and to the depth required to reach suitable material. Replace with approved material, compact and shape to form the utility bed.

Installation of pipe bedding and overburden backfill (from the spring line of the utility pipe to the surface) in the trench shall typically be accomplished by the Contractor using dried excavated native material, which costs shall be included in the unit price of the pipe associated with the trench.

The cost of replacing unsuitable (if, in the sole judgment of the Engineer the native excavated material is unsuitable) shall be borne by the Owner utilizing one (1) or more of the following options (at the discretion of the Engineer):

- (1) Haul-in/grade/compact BACKFILL; per CUBIC YARD at the unit price bid for item "4. Haul-in/grade/compact BACKFILL (vehicular measure); per CY";
- (2) Haul-in/grade/grade LIMESTONE (#57/610) at the unit price bid for item "5. Haul-in/grade/compact Limestone (#57/610) (vehicular measure); per TON".

An exception to this provision shall be in the case that a trench is left opened, improperly backfilled, or otherwise exposed to surface runoff by the Contractor's construction operations. In this case, the cost of replacing (or drying) unsuitable backfill shall be borne entirely by the Contractor.

Sheeting and bracing: Provide and maintain continuously to prevent damage to property, injury to persons, or erosion and cave-ins. Where sheeting and bracing is the result of excess trench width(s), cave-in or the threat of cave-in resulting from the Contractor's poor workmanship or equipment operations, then the entire cost of sheeting and bracing as directed by the Engineer shall be borne by the Contractor. In the event that natural conditions are uncovered that could not have been reasonably anticipated, or in the event that "Sheeting and Bracing" is specifically called out on the plans, or in the event that the Engineer directs Sheeting and Bracing as a precautionary measure NOT the result of the Contractor's workmanship, then Sheeting and Bracing shall be paid for at the unit price as agreed to by the Engineer in writing.

- A. Where practicable, drive sheeting ahead of the excavation to avoid loss of material to be retained. When excavating below the sheeting, take care to avoid trimming that will cause voids in the banks to be retained.
- B. Completely remove bracing and sheeting unless otherwise directed as the backfilling progresses. Remove sheeting when the trench has been backfilled at least 1/2 its depth, or when removal will not endanger the construction or adjacent structures. Immediately backfill all voids caused by the removal of sheeting with sand or other approved fine material and compact by ramming or by watering.
- C. When required for safety and directed by the Engineer, leave sheeting, bracing, or shoring in place and cut off the top neatly at an approved elevation below finished grade.

Dewatering (where approved in advance by the Engineer): In extreme cases where normal dewatering methods are insufficient, the ENGINEER may direct that trench excavations be dewatered using one or more of the following methods:

- A. Well point systems must be efficient enough to lower the water level in advance of the excavation and maintain it continuously to keep the trench bottom and sides firm and dry. Use well points especially designed for this type of service, with a pumping unit capable of maintaining a high vacuum and, at the same time, of handling large volumes of air as well as water. Operate the well point system in a manner to prevent property damage.
- B. Lay trenched gravity under-drain systems with open joints and bed of suitable loose rock or gravel below trench grade at a depth that will permit the bedding of the main utility upon a suitable foundation if the under-drain system is left in place. Use PVC, vitrified clay or terracotta drain pipes of adequate capacity in the gravity under-drain system to lower the water level in the trench in order that the main utility may be laid "in the dry". Sumps may be provided at various points along the route of the under-drain system for the use of pumps to remove the water.
- C. If the material encountered at trench grade is suitable for the passage of water without destroying the sides or bottom of the main trench, sumps may be provided at intervals at the sides of the main trench excavation, and pumps may be used to lower the water level by taking their suction from these sumps. In the event such sumps are employed, exercise care to prevent the movement of foundation material.
- D. Dispose of water from trench dewatering operations without causing damage or inconvenience to the work, the surrounding area or general public. Keep water in existing gutters; provide conduits, if required.
- E. The Contractor shall include ALL costs for installation of pipe as shown on the drawings in areas in which the water table is likely to exceed the bottom of the trench.

Subsurface obstructions:

- A. Determine the exact location of pipes, conduits, wires, mains, footings and other underground structures and obstructions to be encountered in trenching or excavating.
- B. Adequately protect the obstructions from damage or displacements.

Monuments: upon completion of the work, a Registered Land Surveyor, at the Contractor's expense, shall replace all disturbed monuments or benchmarks.

Backfill:

- A. Backfill material: Clean earth fill composed of sand, sand and clay, sand and rock, or crushed rock.
- B. Use borrow material if suitable material from the excavation is not available. Borrow material shall be required to meet or exceed the requirements of these specifications and shall be paid for at truck measure. The Contractor shall be responsible for loading, transporting, depositing, spreading, compacting, and otherwise handling the backfill. See other applicable sections of these technical specifications. It is not anticipated that any borrow material will be required for backfilling of buried pipe.

THE CONTRACTOR SHALL BE REQUIRED TO RE-DRESS AND RE-GRADE ALL EXCAVATIONS UPON INITIAL BACKFILL AND NO SOONER THAN 90 DAYS FOLLOWING INITIAL BACKFILLING OPERATIONS. The cost of additional material (if any) for re-dressing and re-grading trenches after 90 days shall be included in the unit price bid for the appropriate diameter and depth of pipe.

- C. Storage of material: Store excavated material suitable for backfill in areas causing the least inconvenience to traffic flow and in no case block normal ingress and egress on public thoroughfares. **Do not block normal access to private property in excess of 3 hours.** Maintain access to all fire hydrants.
- D. Backfill procedures:
 - 1. Carefully place and tamp fine material around the lower half of the utility. Continue backfilling in layers not exceeding 6 inches in thickness for the full trench width, until the fill is 12 inches above the top of the utility, using the best available material from the excavation, if approved, and excluding stones or rock fragments larger than: 3 inches on concrete, cast-iron and steel pipe; 1-1/2 inches on clay pipe; one inch on plastic pipe; 1/2 inch on fiber and AC pipe.
 - 2. Where concrete or other encasement of pipe is indicated, begin the backfill after the encasement has been inspected/approved and has attained 3/4 of its designed strength.
 - 3. Lower the material for these first layers of backfill to within 2 feet above the top of pipes before allowing it to fall on the pipes, unless using approved chutes or other devices that will protect the pipes from impact conveyed from greater height.
 - 4. Thoroughly compact and complete these first layers of the backfill before the remainder of the trench is backfilled.

Backfill to 90 percent of maximum density at optimum moisture, as determined by ASTM D1557-70, Method D.

- 5. Backfill the remainder of the trench in layers not exceeding 12 inches with no backfill fragments exceeding 6 inches. Suitably compact the backfill by rolling, tamping, or other means. **Where trenches are cut in pavements, compact to 95% maximum density, at optimum moisture, as determined by ASTM D1557-70, Method D. In other areas, compact to not less than 90% of maximum density.**
- 6. Density tests to determine compliance with the compaction requirements specified will be made by a testing laboratory approved by the ENGINEER, at the CONTRACTOR'S expense. Test locations will be determined by the Engineer, but in any case, will be not more than 100 feet apart where the trench cut is continuous. Tests will also be made where a trench crosses a paved roadway or future paved roadway. If any test results are unsatisfactory, re-excavate and re-compact the backfill until the specified compaction is obtained. For a continuous trench, additional compaction tests will be

made to each side of an unsatisfactory test to determine the extent of re-excavation and re-compaction necessary. The Engineer will determine the spacing of additional tests.

7. Conduct backfilling operations for excavations for utilities within buildings that have soil-bearing floor slabs in a manner that will result in densities comparable to the densities of the soil adjacent to the excavation. Keep the excavation within buildings free of water until the backfilling is completed.
8. Flooding or puddling with water to consolidate backfill may be done, only when approved by the Engineer, in which cases the flooding or puddling operation is to be repeated with each 2 feet of backfill placed.
9. Accomplish mechanical compaction using pneumatic or gasoline-powered tampers and/or flat-plate vibrators, except in close proximity to the utility in the first layers of the backfill. Here obtain compaction with hand-operated tamping devices.

Dispose of debris and excess material off site. **The OWNER reserves salvage rights and may choose whether or not the contractor shall haul excess material to nearby property.** Should the OWNER choose not to salvage excess materials, the Contractor is responsible for disposing of the excess material at his expense in a manner and location deemed acceptable by the Engineer. Such associated costs shall be included in the unit price bid for the pipe being installed.

Protective concrete slip: Where required by the ENGINEER, or excessive loads of local jurisdiction requires, provide a protective concrete slab 8 inches thick, or as indicated on the drawings, or as required by local authority, whichever is of greater depth. Step the trench back properly for this protective slab, providing a width not less than the width of the trench plus one foot on each side. Use ready-mixed concrete with a minimum 28-day compressive strength of 3,000 psi. Screed the top finished surface. Provide minimum reinforcement of welded wire fabric 6 x 6/6-6. Finish the top of slab 1-1/2" minimum below the finished grade of the final surface course if required by the ENGINEER or stated in the details.

Asphaltic Concrete Pavement restoration: Rebuild or repair asphaltic concrete (AC) pavement cut or damaged in connection with the work of this section. Provide a restored pavement equal in every respect to the pavement cut or damaged, including the base course, surface treatment and grade and in accordance with all local requirements, unless otherwise detailed.

Measurement and payment of removed/replaced pavements shall not exceed, in width, a dimension equal to or less than the pipe depth at the location where pavement is restored. **Sawcutting of removed pavement(s) is required.**

- A. Backfill shall be compacted per item "D.5." of these "Backfill" specifications.
- B. Backfill should be installed up to an elevation which is about 8" below finished grade (to accommodate 6" thick limestone base + 2" thick hot asphaltic concrete).
- C. Upon completion of backfill, apply a temporary limestone base about 8" in thickness, approximately flush with the adjoining AC pavement.
- D. Do not remove the temporary limestone base for 15 days after it has been constructed. Then cut down the temporary limestone base to a depth which will result in a finished AC surfacing that is flush with adjacent AC pavements.
- E. Final surfacing: After removal of the temporary surfacing, tack coat limestone base and place an asphaltic concrete surface course thereon and finish to the indicated final grade.

Specific protection and restoration of property: Enclose trunks of trees adjacent to the work with substantial wooden boxes of such height as is required to protect them from injury due to piled material, operation of equipment, or otherwise due to the work. Operate excavating machinery and cranes with care to prevent damage to trees, particularly to overhanging branches and limbs.

- A. Cut branches and limbs only with permission of the Engineer. Cut branches smoothly and neatly without splitting or crushing. If cutting or unavoidable damage is done to branches or trunks of trees, neatly trim the cut or damaged portions and cover with an application of grafting wax or pruning paint.
- B. Protect by suitable means cultivated hedges, shrubs, plants and lawns which may be damaged by the operations or dig them up and temporarily replant and maintain them. Replant them in their original positions when the construction operations have been substantially completed, and care for them until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such degree as to affect their growth or diminish their beauty or usefulness, replace them with items of kind and quality equal to the kind and quality existing at the start of the work.
- C. Where excavation is performed in grassed areas of public or private property, conduct the operations so as to minimize damage to the property. Remove and store for re-installation sod and topsoil that may be damaged in the course of the work. After backfilling and compacting the trench, spread the topsoil to provide at least a 4-inch layer so as to restore the property to original line and grade. Provide additional topsoil if needed to obtain the specified thickness, line and grade. Treat the topsoil with 0.3 pounds of 6-6-6 fertilizer per square yard and then replace the original sod. If this sod is not suitable for reuse, replace it with a sod comparable in species and quality to the existing lawn. Roll and water the area as required until a hardy growth has been developed.

Clean-up: Upon completion of the work, leave the site in a neat, safe condition and remove all excess material, temporary structures, bracing, shoring and debris. Grade abrupt changes in elevation of ground surface smooth and fill holes with suitable material.

INTENTIONALLY LEFT BLANK

3 - MEASUREMENT AND PAYMENT

No separate payment will be made for work covered by this section unless specifically provided for in the bid form; all costs in connection therewith shall be included in the applicable contract price for the utility to which the work pertains. When specifically provided for in the bid form, the following items of work will be measured and paid for separately.

- A. Replacement of unsuitable material: Measured in cubic yards of unsuitable material removed and replaced with suitable material placed and compacted in accordance with these specifications and paid for at the contract price per cubic yard/per ton. The Engineer shall approve the method of measurement and quantity measured.
- B. Extra utility-bedding material: Measured in cubic yards of extra utility-bedding material required and authorized by the Engineer and placed in accordance with these specifications and paid for at the contract price per cubic yard/per ton. The Engineer shall approve the method of measurement and the quantity measured.
- C. Sheeting and bracing left in place: Include all costs pertaining to sheeting and bracing where specified in the unit price bid for the utility being installed. If included as a separate pay item, the material costs of sheeting authorized to be left in place will be measured in thousand board feet; i.e., one (1) board foot is equal to a nominal 1" x 12" board 1 foot in length. One-thousand board feet (the contract unit) is equal to a 2"x12" board 500 feet in length.

If not specifically shown on the plans and details as a separate pay item, then include as a part of the costs of trenching, in the contract price for the utility to which the work pertains.

- D. Protective concrete slab: Measured in square yards of concrete required and authorized by the Engineer, satisfactorily placed and cured, and paid for at the contract unit price per square yard. The Engineer shall approve the method of measurement and the quantity measured.
- E. Pavement restoration: Measured in square yards of the final pavement restored in accordance with these specifications and as directed; however, the maximum width for pay purposes will be the nominal diameter of the utility plus 2 feet on either side or both sides thereof, or total width = required depth (whichever is greater), depending on the location of the utility with respect to the pavement or the width of the protective concrete slab; paid for at the contract unit price per square yard.

TECHNICAL SPECIFICATIONS

MAINTENANCE OF EXISTING WASTEWATER SERVICE

1—SCOPE OF WORK

The scope of work contained under this section of the Technical Specifications shall be included under the amount bid for item “14. Maintenance of Sewer – Bypass Pumping (LS#51); per EACH”, to maintain, collect, transport, and dispose of existing "live" sanitary sewerage wastewater.

2—WORK REQUIREMENTS

The Contractor shall install bypass pumping equipment, piping, valves, fittings, and accessory items in order to maintain influent flows of raw wastewater and allow for the pumping of wastewater from affected lift station(s) throughout the duration of the project as described herein.

Definition of “**peak hours**”: all wet weather periods during and two (2) hours following rainfalls exceeding 1”; during dry weather periods – 7 a.m. – 9 p.m.

Definition of “**off-peak hours**”: all wet weather periods during and following rainfalls less than 1”; all dry weather periods – 9 p.m. – 7 a.m.

A narrative of the intent of “Maintenance of Existing Wastewater Service” follows:

- a. **HAEIDD Lift Station (#51)**: the existing station and impacted sewer infrastructure due to construction may be taken out of service for a maximum of four (4) hours during peak hours, and the station may be taken out of service for a maximum of 8 hours during off-peak hours. By-pass pumping shall convey the raw wastewater entering the existing wet well to a vessel supplied by the contractor at rate that shall allow the system to continue to function properly and not cause sewerage impacts to the upstream and/or adjacent sanitary sewer infrastructure or structures. Anticipated peak flow: 600 GPM. Contractor shall use the anticipated flow as a guide, but shall ensure adequate pumping capacity is met. A NEW force main bypass shall be installed to the NEW force main to receive the by-pass pumping discharge shall be included in ONE (1) EACH price bid for item “16. Install Force Main Bypass Assembly (LS #51)”.

The CONTRACTOR shall contact City of Hammond Sewer and Water Superintendent (Guy Palermo (985-969-7169) to confirm the contractor’s “out of service” schedule, and the Contractor shall coordinate construction activities so as to keep all active sanitary sewer collection services and force mains in service throughout the construction process.

3—MEASUREMENT AND PAYMENT

Measurement and payment of bid for item “14. Maintenance of Sewer – Bypass Pumping (LS#51); per EACH”; per EACH”, shall be measured and paid for at the contract unit price as bid, which costs shall represent all costs associated with maintaining, collecting, transporting, and disposing of existing collected raw wastewater throughout the period necessary to place the existing and new lift stations and equipment in service.

TECHNICAL SPECIFICATIONS

YARD PIPING – VALVES - GATES

1—GENERAL

This section of the specifications covers requirements of materials and workmanship and testing for all piping, valves, fittings, and accessories that are required to be accomplished under this contract as shown on the drawings or reasonably implied within these specifications and designated to be included in the per each unit price bid for items

- “10. Install Combination Air Valve”,
- “12. Yard Piping (LS#51)
- “13. Install Force Main Bypass Assembly (LS#51)”,

Yard piping generally includes all potable water piping, all on-site ductile iron sewer force main piping between the pump discharges and immediately downstream of the valve pit, lift station force main tie-ins and discharge piping, and associated work as called out on the drawings or reasonably implied. A listing of “Yard Piping” is shown on “Table Y-1” at the end of this section of the specifications.

The contractor shall provide all materials, labor, equipment and supervision required to provide and construct all required items as provided on the plans and/or as called for hereinafter plus such miscellaneous connections and fittings as are normally incidental to work of this character and scope. The purpose of this section of the specifications is to specify work and materials necessary to provide a system complete, acceptable, and ready for operation.

All piping, valves, fittings, and accessories shall be handled by hand or with approved slings or supports, laid, jointed, etc., in strict conformance with the manufacturer’s recommendations. Dropping from delivery vehicles shall not be permitted.

2—PIPE, JOINTS, AND FITTINGS

General: Yard Piping shall be constructed of the size and type designated on the plans, and as stipulated in the proposal. Basic material shall be of the types as follows for the particular use.

A. DUCTILE IRON PIPE - *FM above grade*

Ductile iron pipe shall be manufactured in accordance with ANSI 21.51, and conform to AWWA C-151, with minimum wall thickness based on 150 psi working pressure plus 100 psi surge pressure.

- (1) Minimum DI pipe wall thickness— 3”, 4”, 6”, & 8” diameter = 0.25” thk; 10” diameter = 0.26” th.; 12”, & 14” diameter = 0.28” th.; 16” diameter = 0.30” th.
- (2) Slip Joint Pipe—all horizontal segments of DI Pipe shall have slip joints equal to “Tyton”, “Fastite”, or “Bell-Tite” joints.
- (3) Flanged Joint Pipe—all vertical segments and bends/tees transitioning from horizontal to vertical runs of DI pipe shall have flanged joints properly restrained based on manufacturer’s recommendations for the design conditions.
- (4) Mechanical joint fittings—mechanical joint fittings and accessories shall conform to AWWA Standard C-III, with corrosion resistant, high strength alloy steel nuts/bolts.
- (5) Coatings for potable water DI piping—DI Pipe for *potable water* shall be **cement lined** and seal coated inside and coated outside in accordance with AWWA C-104, latest revision.
- (6) Coatings for domestic sewer, compressed air, & treated sewer effluent DI piping—DI pipe for *domestic sewer, compressed air, & treated sewer effluent* shall be **unlined**.

B. C-900 PIPE—thick-walled plastic pipe

(1) Pipe - Polyvinyl chloride (PVC) pressure pipe shall fully conform to American Water Works Association (AWWA) standard C900-16 for sizes 4 in. to 60 in. pipe shall be made from class 12454-A or class 12454-B virgin compounds per ASTM D1784, with an established hydrostatic-design-basic (HDB) rating of 4,000 PSI for water at 73.4° F (23 deg. C). All PVC pipe shall be in accordance with AWWA C900-16 and shall be furnished in standard laying lengths of 20 ft. +1” (unless otherwise agreed upon). A maximum of 15% of each pipe size may be furnished in random lengths not less than 10 ft. each. Pipe shall bear markings as specified in AWWA C900-16.

Pipe shall have either Iron-Pipe-equivalent outside diameters (O.D.S) or cast iron-pipe-equivalent O.D.S. Pipe requirements for 4 in. through 60 in. pipe shall be in an accordance with the following table:

<u>Pressure Class</u> (working pressure rating)	<u>Dimension Ratio</u> (DR)
100 psi	41 (DIPS)
125 psi	32.5 (DIPS)
200 psi	21 (DIPS)

Each standard and random length of pipe shall be factory proof-tested at four times its rated class pressure as listed above for a minimum dwell of 5 seconds.

(2) Joints - Couplings shall be of the elastomeric gasket type, and shall be either integral bell type or doublebell coupling type. The wall thickness of PVC couplings using elastomeric seals shall be adequate to withstand pressure not less than the pressure class rating of the pipe with which they are designed to be used. Couplings shall bear markings as specified in AWWA C900-16.

(3) Valves and Fittings - Fittings for PVC Pipe with 4" I.D. and larger shall be cast iron short body fittings with bell and body metal thickness in accordance with AWWA C500, equal to Mueller.

All valves shall be cast iron or brass and shall be specified hereinafter in these specifications. Valves shall be connected to the plastic pipe with adaptors as recommended by the manufacturer.

All connections between plastic pipe and pipe of other material shall be made with adaptors as recommended by the manufacturer. Fittings shall be marked with the NSF seal of approval.

(4) Manufacturer's Representative – If required by the Engineer, the pipe manufacturer shall furnish a trained representative for one (1) eight-hour day on the job site to instruct and supervise the contractor in the proper method and techniques of installation of the pipe and fittings where more than 200 feet is being installed, unless the Contractor has satisfactorily utilized the exact type of pipe within the past twelve (12) months.

C. PVC PIPE—thin-walled - (Not required this contract)

(1) Pipe—Plastic pipe for water distribution lines shall conform to US Department of Commerce Commercial standard CS256-63 for pressure ratings of 200 PSI (SDR21) and standard CS270-60 for schedule 40, and schedule 80, and C-900 dimensions.

The pipe material shall be virgin rigid polyvinyl chloride compounds conforming to ASTM D-1784 for type I PVC with a hydrostatic design stress to 2,000 psi at 73.4°F, and shall be marked with National Sanitation Foundation (NSF) approval markings.

Minimum requirements for plastic pipe shall be in accordance with the following table:

Minimum Allowable Pressure for thin-walled PVC pipe	
Pipe Diameter	Rating at 73.4° F
Less than ¾"	Schedule 40 (>600 psi)
¾ "	Schedule 40 (480 psi)
1"	Schedule 40 (450 psi)
1½"	Schedule 40 (330 psi)
2"	PR-160 (160 psi)
3"	PR-160 (160 psi)
4" and larger	PR-160 (160 psi)

Pipe size may be furnished in forty-foot (40') lengths provided the pipe is supported at center and quarter points in transit.

(2) Joints:

(a) Solvent Weld Joints: Solvent weld joints shall be made with factory solvent welded bells or with factory supplied couplings. The pipe fittings and couplings shall be at the same temperature when the joints are made. Before the solvent is applied, the joint shall be tested for dry fit. The dry fit should be snug. If the dry fit indicates loose couplings, the pipe shall be rejected as faulty because of improperly sized pipe. Likewise, if the pipe is out-of-round to the extent that force is required to place the fitting on the pipe, the pipe shall be rejected. Building up the joint for undersized pipe with multiple layers of solvent cement or "shaving" the end of the pipe will not be permitted.

Use a non-synthetic brush to apply solvent cement per the manufacturer's recommendation.

Cement should be applied lightly to the inside of the fitting and somewhat more generously to the outside of the pipe. After the solvent has been applied, the joints shall be made before the solvent had dried. The pipe should be stabbed into the fitting and given a quarter turn. Additional twisting accomplishes no useful purpose and may actually weaken the joint. If sufficient cement has been used, a small bead will form between the pipe and the shoulder of the fitting. It is recommended that this excess solvent be removed with a cloth as it serves no useful purpose and increase the drying time. After assembly, the joint shall not be moved until the cement weld has set up. The instructions of the manufacturer should be followed carefully in this regard.

Due to the high coefficient of thermal expansion, sufficient allowance should be provided for expansion and contraction. For this reason, it is a requirement to backfill during the early morning hours during hot weather. If this is not practicable, the pipe should be filled with water before the trench is backfilled.

When the ambient temperature is 70°F, the pipe shall be laid with enough "snake" in the pipelines to provide for 1 inch of contraction for each 10' of pipeline. For each 10°F until the temperature is about 70°F, the allowance for contraction shall be increased ¼ inch per 10' feet of pipeline. The "snaking" of the pipeline may be vertical in installation where the trench is narrow. In such installations, the trench may be overexcavated in an amount so that the required contraction may be provided.

(b) Rubber Ring Joints: Rubber ring joints shall utilize factory solvent welded bell and spigot joint fittings and shall be in full compliance with manufacturer's recommendations and industry standards as published by the plastic pipe institute, or joints shall be rubber ring joints equal to Certainteed. When rubber gasket joint PVC pipe is used, "snaking" is unnecessary to compensate for expansion.

(c) Threaded Connections Tee: Threaded connections will not be permitted and all connections between plastic pipe and threaded fittings will be made with male threaded adaptors and female threaded adaptors. All threaded fittings shall use Teflon tape or rope.

(3) Valves and Fittings:

Fittings for plastic pipe shall be type 1 PVC material. Schedule 40 fittings shall be used with schedule 40 pipe, as well as pressure rated pipes PR-200 and PR-160. Schedule 80 fittings shall be used with schedule 80 pipe.

All valves shall be cast iron or brass and shall be specified hereinafter in these specifications. Valves shall be connected to the plastic pipe with adaptors as recommended by the manufacturer. All connections between plastic pipe and other material shall be made with adaptors as recommended by the manufacturer. Fittings shall be marked with the NSF seal of approval.

(4) Manufacturer's Representative:

The pipe manufacturer shall furnish a trained representative for one (1) eight-hour day on the job site to instruct and supervise the contractor in the proper method and technique of installation of the pipe and fittings where more than 200 feet is being installed.

D. POLYETHYLENE PIPE - Sewer Force Mains below grade

(1) Pipe: Polyethylene Piping materials and fittings shall be made of a PE 3408 high density, high molecular weight polyethylene piping system in accordance with ASTM D3350, having a cell classification of PE345434C.

(2) Technical specifications: Dimensions and workmanship shall be as specified by ASTM F714. The pipe shall be equal to Driscopipe 1000 as manufactured by Phillips Driscopipe, Inc., Richardson, Texas.

(3) Fittings: All fittings, connections, bends, etc. shall be of the same materials as the pipe, and as recommended by the manufacturer. **All bends shall be of the long sweep type (fabricated) to minimize hydraulic losses.** Where MJ fittings are used, factory approved welded flanges shall be installed to accommodate the MJ fitting, the cost of which shall be included in the unit price bid for items "9." or "10.", as applicable. The sewer force main lines to be installed shall be capable of withstanding 50 psi working pressure and shall be tested as noted herein.

(4) Joints: The pipe/fittings shall be joined by the butt fusion technique, except at the joining of the pipe to other materials, in which case the manufacturer's recommendations shall be followed.

(5) Laying and Jointing Sewer Force Main Pipe—all sewer force main piping shall be laid to a depth to result in a minimum of 60" of cover. At a suitable distance each side of directional bores ($\geq 100'$), open cut pipelaying shall result in a minimum transition of 60" to no shallower than 72" of cover over the pipe (at each end of the directional bore). Trenches shall be as narrow as practicable, to minimize undermining of nearby roadways. Backfill and bedding shall be accomplished using native materials, compacted to at least 90% of Standard Proctor density (AASHTO-99), utilizing the techniques specified in ASTM D-2321.

(6) General: Grading, excavation, and earthwork required in laying sewer force main pipe shall conform to these specifications (note in particular "Technical Specifications – Excavating, Trenching, and Backfilling for Utilities").

a. Installation of pipe shall be in conformance with provisions of AWWA Standard C600, installation of cast iron water mains, except in cases of conflict with these specifications, in which case these specifications shall govern.

b. When work is suspended either for the night or for any other reason, open ends of pipe shall be securely plugged to prevent the entrance of mud, water, or any obstruction.

c. Dead ends of pipe and unused branches of crosses, tees, valves, etc., shall be closed with plugs suitable to the type of pipe used.

d. Proper and suitable tools and appliances for the safe convenient handling and laying of pipe shall be used, and care shall be taken to prevent damage to pipe coating. If required by the size of pipe being used, mechanical pullers, (or spreaders) shall be used in conformance with the pipe manufacturer's instructions.

e. While pipe laying is in progress, the trench shall be kept free from water. [NOTE dewatering requirements per paragraph "E.", "Technical Specifications—Excavation, Trenching, and Backfilling for Utilities"].

f. While suspended in the sling and before lowering in the trench, the pipe shall be swabbed clean and inspected for defects and tapped with a light hammer to detect cracks. Defective, damaged, or used pipe shall not be used.

(7) Force Main Piping Thrust Anchorage: For all force main lines at 1/8 bends or greater and at tees, caps, plugs, and fittings, restrained joints as shown on the details, or anchor rods shall be provided by the contractor to firmly secure these fittings. Anchor blocks and straps shall be used under valves on plastic pipe in accordance with the manufacturer's standards or recommendations.

Concrete thrust blocks may not be substituted without prior consent of the ENGINEER, in which case they shall be of such size and dimensions as detailed on the plans. Concrete for thrust blocks shall not be leaner than 1 to 2.5 (cement to sand ratio), to five (5) parts aggregate, and shall have a compressive strength of $\geq 3,000$ PSI at 28 days. Note "General Construction" article 15 for detailed requirements.

(8) TESTING FORCE MAIN PIPING: Completed segments of PE Force Main shall be tested as specified herein, at or near the PE pipe ends, or at reasonable intervals (nominally 1,000' – 3,000' segments), by the installation of welded caps or plugs, to be removed and joined with adjacent segments when both adjoining segments have been satisfactorily tested.

a. The contractor shall furnish all water, taps, pumps, piping, gauges, and measuring devices for performing all pressure and leakage tests.

b. Care shall be taken to expel all air from the pipes, and, if necessary, the pipes shall be tapped at the high point to vent the air prior to the pressure test/leakage test.

c. *Pressure Test* (1-hour min.): No pressure tests shall be made until all concrete thrust blocks (if allowed) are seventy-two (72) hours old (minimum). Before any sewer force main lines will be accepted by the engineer, **all lines shall be subjected to hydrostatic pressure of 50 pounds per square inch**, unless required otherwise by the special conditions, for a period of not less than one (1) hour, and any defective work revealed by the test shall be repaired or replaced by the contractor and the system retested.

d. *Leakage Test* (2 hours min.): After the pressure test, a separate leakage test shall be conducted for not less than two (2) hours at 50 PSI. The amount of leakage shall not exceed ten (10) gallons per day for each mile of pipe for each inch of diameter under a constant minimum head of 10 feet of water. All visible leaks shall be stopped where leakage is excessive, leak shall be stopped, defects corrected, and pipe shall be re-tested.

E. STAINLESS STEEL AIR PIPING - (Not required this contract)

Pipe: Piping for air supply from the Blowers to the compressed air distribution lines shall be stainless steel **Grade 304L**.

a. Minimum wall thickness for 8" diameter SS air piping shall be 0.165".

b. Minimum wall thickness for 6" diameter SS air piping shall be 0.150".

c. Flanged DI pipe may be substituted for SS blower pipe compressed air manifold piping if permitted by the manufacturer.

d. Pipe shall be supported with supports as recommended by the manufacturer.

3—GATES & VALVES

A) CHECK VALVES

1) Scope: This specification covers the design, manufacture, and testing of 2 in. through 48 in. Surgebuster® Swing Check Valves suitable for cold working pressures up to 250 psig, in water, wastewater, abrasive, and slurry service. The check valve shall be of the full flow body type, with a domed access cover and only two moving parts, the flexible disc and the Disc Accelerator™.

2) Standards and Approvals

a) The valves shall be designed, manufactured, tested and certified to American Water Works Association Standard ANSI/AWWA C508.

b) The valves used in potable water service shall be certified to NSF/ANSI 61 Drinking Water System Components – Health Effects, and certified to be Lead-Free in accordance with NSF/ANSI 372.

c) Manufacturer shall have a quality management system that is certified to ISO 9001 by an accredited, certifying body.

3) Connections

a) The valves shall have flanges with drilling to ANSI B16.1, Class 125.

4) Design

- a) The valve body shall be full flow equal to nominal pipe diameter at all points through the valve. The 4 in. valve shall be capable of passing a 3 in. (75mm) solid. The seating surface shall be on a 45-degree angle to minimize disc travel. A threaded port with pipe plug shall be provided on the bottom of the valve to allow for field installation of a backflow actuator or oil cushion device without special tools or removing the valve from the line.
- b) The top access port shall be full size, allowing removal of the disc without removing the valve from the line. The access cover shall be domed in shape to provide flushing action over the disc for operating in lines containing high solids content. A threaded port with pipe plug shall be provided in the access cover to allow for field installation of a mechanical, disc position indicator.
- c) The disc shall be of one-piece construction, precision molded with an integral O-ring type sealing surface and reinforced with alloy steel. The flex portion of the disc contains nylon reinforcement and shall be warranted for twenty-five years. Non-Slam closing characteristics shall be provided through a short 35-degree disc stroke and a disc accelerator to provide a cracking pressure of 0.3 psig.
- d) The disc accelerator shall be of one-piece construction and provide rapid closure of the valve in high head applications. The disc accelerator shall be enclosed within the valve and shall be field adjustable and replaceable without removal of the valve from the line. The disc accelerator shall be securely held in place captured between the cover and disc. It shall be formed with a large radius to allow smooth movement over the disc surface. The disc accelerator shall work in tandem with the disc during open/close. No spring-loaded accelerator which point loads onto the BUNA-N rubber of the disc shall be allowed.
- e) The valve disc shall be cycle tested 1,000,000 times in accordance with ANSI/AWWA C508 and show no signs of wear, cracking, or distortion to the valve disc or seat and shall remain drop tight at both high and low pressures.

5) Materials

- a) The valve body and cover shall be constructed of ASTM A536 Grade 65-45-12 ductile iron or ASTM A126 class B gray iron for 30 in. (800mm) and larger.
- b) The disc shall be precision molded Buna-N (NBR), ASTM D2000-BG.
- c) The disc accelerator shall be Type 302 stainless steel. The cover bolts shall be type 316L stainless steel.
- d) The Surgebuster shall be coated on the exterior and interior Fusion Bonded Epoxy (FBE) min. 12 mils. The coating shall be capable of passing a holiday/spark test with certifications of valves passing this test. No spray-on epoxies or other coatings are acceptable.

6) Options

- a) A mechanical indicator shall be provided to provide disc position indication on valves 3" (80 mm) and larger. The indicator shall have continuous contact with the disc under all operating conditions to assure accurate disc position indication.

7) Manufacture

- a) Manufacturer shall demonstrate a minimum of five (25) years' experience in the manufacture of resilient, flexible disc check valves with hydraulic cushions. Manufacturer shall also provide references installations that have been in service a minimum of 5 years in end users system.
- b) All valves shall be hydrostatically tested and seat tested to demonstrate zero leakage. When requested, the manufacturer shall provide test certificates, dimensional drawings, parts list drawings, and operation and maintenance manuals.

- c) The exterior and interior of the valve shall be coated with an NSF/ANSI 61 approved fusion bonded epoxy coating.
- d) Surgebuster® Swing Check Valves shall be Series #7200 as manufactured by Val-Matic® Valve & Mfg. Corporation, Elmhurst, IL, USA or approved equal.

B) WASTEWATER COMBINATION AIR VALVE

- 1) Scope: This specification is intended to cover the design, manufacture, and testing of 1 in. (25 mm) through 8 in. (200 mm) Wastewater Combination Air Valves suitable for pressures up to 150 psig (1000 kPa). Wastewater Combination Air Valves shall be automatic float operated valves designed to exhaust large quantities of air during the filling of a piping system and close upon liquid entry. The valve shall open during draining or if a negative pressure occurs. The valve shall also release accumulated air from a piping system while the system is in operation and under pressure. The valve shall perform the functions of both Wastewater Air Release and Wastewater Air/Vacuum Valves and furnished as a single body or dual body type as indicated on the plans.
- 2) Standards, Approvals and Verification
 - a) Valves shall be manufactured and tested in accordance with American Water Works Association (AWWA) Standard C512.
 - b) Manufacturer shall have a quality management system that is certified to ISO 9001 by an accredited, certifying body.
- 3) Connections
 - a) Single body valves sizes 4 in. and smaller shall have full size NPT inlets and outlets equal to the nominal valve size with a 2 in. inlet on 1 in. valves. The body inlet connections shall be hexagonal for a wrench connection. The body shall have 2" NPT cleanout and 1" NPT drain connection on the side of the casting.
 - b) Dual body valves sizes 3 in. and smaller shall have full size NPT inlets and outlets equal to the nominal valve size with a 2 in. inlet on 1 in. valves. The body inlet connection shall be hexagonal for a wrench connection. Valve sizes 4 in. through 6 in. shall have bolted flanged inlets and NPT outlets. 8 in. valves shall have flanged inlets and outlets. Flanges shall be in accordance with ANSI B16.1 for Class 125 iron flanges.
 - c) The valve shall have 3 additional NPT connections for backwash accessories.
- 4) Design
 - a) Both single and dual body valves shall provide an extended body with a through flow area equal to the nominal size. Floats shall be unconditionally guaranteed against failure including pressure surges. A resilient bumper shall be provided on 4 in. (100 mm) and larger sizes to cushion the float during sudden opening conditions. The seat shall provide drop tight shut off to the full valve pressure rating.
 - b) Dual body valves shall consist of a Wastewater Air Release Valve piped to a Wastewater Air/Vacuum Valve with a full-ported stainless-steel valve.
 - c) The Wastewater Air Release Valve shall have an extended leverage mechanism with sufficient mechanical advantage so that the valve will open under full operating pressure. An adjustable threaded resilient orifice button shall be used to seal the precision discharge orifice in the cover.
 - d) The Wastewater Air/Vacuum Valve sizes 4 in. and larger shall have a cover fitted to the valve body by means of a machined register to maintain concentricity between the top and bottom guide bushings at all times. The tandem float assembly shall have a hexagonal guide shaft supported in the body by circular bushings to prevent binding from debris. The upper float shall be protected against direct water impact by an internal baffle. The seat shall be a minimum of .5 in. thick on 2 in. and larger valves and secured in such a manner as to prevent distortion.

- e) Single body valves shall have a full port orifice, a double guided plug, and an adjustable threaded orifice button. The 1 in. body shall be globe style to increase float clearance and reduce clogging. The plug shall be protected against direct water impact by an internal baffle and an extended float stem. The plug shall have a precision orifice drilled through the center stem. The float shall include a sensitivity skirt to minimize spillage.
- 5) Materials
 - a) The valve body and cover shall be constructed of ASTM A126 Class B cast iron.
 - b) The float, plug, guide shafts, bushings, all mechanical fasteners shall be constructed of Type 316 stainless steel. Non-metallic guides and bushings are not acceptable. Resilient seats shall be Buna-N.
- 6) Accessories and Coating
 - a) Valve interiors and exteriors shall be coated with an NSF/ANSI 61 certified fusion bonded epoxy in accordance with AWWA C550 when specified.
- 7) Manufacture
 - a) The manufacturer shall demonstrate a minimum of (20) years' experience in the manufacture of wastewater air valves. The valves shall be manufactured and tested in accordance with American Water Works Association Standard (AWWA) C512. When requested, the manufacturer shall provide test certificates, dimensional drawings, parts list drawings, and operation and maintenance manuals.
 - b) Wastewater Combination Air Valves shall be Series 800 or 48A/300 as manufactured by Val-Matic Valve and Manufacturing Corporation, Elmhurst, IL, USA or approved equal.

4—APPROVALS AND WITHHELD PAYMENTS

Upon satisfactory installation of all yard piping, supports, fittings, insulation, and valves, and inspection and acceptance by the Engineer, 90% of the amount bid for the accepted work will be released. The remaining 10% will be withheld as itemized below:

10% - Pending satisfactory leakage and pressure tests

It is the sole responsibility of the Contractor to seek and acquire these approvals and acceptance in writing, and to present them to the Owner in care of the Engineer for their records.

5—YARD PIPING QUANTITY SUMMARY/INVENTORY

The Contractor is responsible for the careful examination of the plans, details, and specifications and for making provisions for the installation of all piping, supports, fittings, valves, hangars, and for the excavation(s) and wall thimbles necessary to render the new wastewater infrastructure functional as shown or reasonably implied by the drawings and specifications.

The work required under item “10. Install Combination Air Valve”, “12. Yard Piping (LS#51)”, “13. Install Force Main Bypass Assembly (LS#51)”, includes, but is not limited to, the items listed on Table “Y-1” found on page “T-46” of these specifications.

6—MEASUREMENT AND PAYMENT

Measurement and payment shall be as noted on the Bid Proposal and further described in these specifications for bid items to be included in the per each unit price bid for items

“10. Install Combination Air Valve”; ONE EACH,

“12. Yard Piping (LS#51); ONE EACH,

“13. Install Force Main Bypass Assembly (LS#51)”; ONE EACH,

as completed and accepted in place by the Engineer, which payment shall constitute full compensation for all labor, materials, freight, re-stocking charges (for unused materials), taxes, insurances, equipment, and all associated work reasonably implied to render the project in full compliance with these specifications.

Table Y – 1 *

YARD PIPING TABLE OF ESTIMATED QUANTITIES **

	Pipe/Description	Diameter	Material	Quantity**	Remarks
a.	HAEIDD Lift Station (LS#51): Discharge Pipe (Pumps to FM)	6"	DI	Varies	** - Bid Item "12."
b.	LS#51: Swing Check Valves (SurgeBuster®)	6"	DI	2 EA	Equiv. to Val-Matic VM-7206
c.	LS#51: Gate Valves (NRS w/ handwheel)	6"	DI	2 EA	Equiv. to M&H C-515
d.	LS#51: 6x6x6 Side Outlet Bend	As Noted	DI	1 EA	Bid Item "12."
e.	LS#51: 8" Spool	8"	DI	Varies	Bid Item "12."
f.	LS#51: 8x6 Reducer	As Noted	DI	1 EA	Bid Item "12."
g.	LS#51: 12x8 Reducer	As Noted	DI	1 EA	** - Bid Item "12."
h.	LS#51: 12" Spool Piece	12"	DI	Varies	** - Bid Item "12."
i.	LS#51: Bypass Assembly – Gate Valve (NRS w/ handwheel)	4"	DI	1 EA	Bid Item "13."
j.	LS#51: Bypass Assembly – Blind Flange (w/ Quick Connect)	4"	DI	1 EA	Bid Item "13."
k.	LS#51: Bypass Assembly – Spool Piece	4"	DI	Varies	** - Bid Item "13."
l.	LS#51: Bypass Assembly – 90° Bend	4"	DI	1 EA	Bid Item "13."
m.	LS#51: Bypass Assembly – 4x8 MJ Tee	As Noted	DI	1 EA	Bid Item "13."

Notes:

*	All work specified on the drawings and within this Table "Y-1" shall be included in bid item "12. Yard Piping (LS#51) or "13. Install FM Bypass Assy. (LS#51)".
**	Quantities are estimated; actual lengths may vary (±) 10% depending on contractor's installation and adjustments

The above list is not exhaustive and is dependent on contractor's means and methods and supplied equipment. No adjustments will be made to Bid Item "12." and "13."

TECHNICAL SPECIFICATIONS
SEWER FORCE MAIN PIPING

1—GENERAL

This section of the specifications covers requirements of materials and workmanship and testing for all force main piping, valves, fittings, and accessories that is required to be accomplished under the respective bid item(s).

The contractor shall provide all materials, labor, equipment and supervision required to provide and construct all required items as provided on the plans and/or as called for hereinafter plus such miscellaneous connections and fittings as are normally incidental to work of this character and scope. The purpose of this section of the specifications is to specify work and materials necessary to provide a system complete, acceptable, and ready for operation.

Certified tests for all pipe and fittings shall be made at the manufacturer's plant to assure conformance with these specifications. Two (2) copies of certificates of test shall be furnished to the Engineer at no additional cost to the owner.

Each fitting and length of pipe shall be clearly handled by hand or with approved slings or supports. Dropping from trucks or into the trench shall not be permitted.

All force main piping, valves, fittings, and accessories shall be handled, laid, jointed, etc., in strict conformance with the manufacturer's recommendations.

2—PRIOR APPROVALS

Force Main lines constructed of polyethylene pipe shall conform to the section of these specifications entitled "Polyethylene Piping". AWWA C-900 (diameter varies, class 125) may be substituted as noted in remark "(b)" below. Prior approval of basic pipe material(s) shall be as follows:

Install/Open Cut 12" PE/PVC FORCE MAIN –bid item "7."					
Pipe Diameter (ID)	Material	Classification	Rating	Reference ASTM/AWWA	Remarks
12" ID	PE	SDR 17	125 psi	D-3350	(a)
12" ID	PVC	DR 25	165 psi	C900-16	(a)(b)

Remarks:

- (a) Polyethylene piping (SDR-11) required at creek crossings/directional bores, and all street/roadway/LaDOTD crossings.
- (b) AWWA C-900 (Class 165); mechanical joint restrainers are required at all bends, and tees; polyethylene piping (SDR-11) required at creek crossings/directional bores, and all street/roadway/LaDOTD crossings.

3—PIPE, JOINTS, AND FITTINGS

A. C-900 PIPE--thick-walled plastic pipe - Acceptable as substitute pipe material for PE (SDR 11 & SDR 17)

(1) Pipe—Polyvinyl chloride (PVC) pressure pipe shall fully conform to American Water Works Association (AWWA) standard C900-16 for sizes 4 in. to 60 in. pipe shall be made from class 12454-A or class 12454-B virgin compounds, as defined in ASTM D1784, with an established hydrostatic-design-basic (HDB) RATING OF 4,000 PSI FOR water at 73.4 deg. F (23 deg. C). All PVC pipe shall be in accordance with AWWA C900-16 and shall be furnished in standard laying lengths of 20 ft. +1 in. (unless otherwise agreed upon). A maximum of 15 percent of each pipe size may be furnished in random lengths not less than 10 ft. each. Pipe shall bear markings as specified in AWWA C900-16.

Pipe shall have either Iron-Pipe-equivalent outside diameters (O.D.S) or cast iron-pipe-equivalent O.D.S. Pipe requirements for 4 in. through 60 in. pipe shall be in an accordance with the following table:

Pressure Class (working pressure rating)	Dimension Ratio (DR)	
100 psi	41 (CIOD)	
165 psi	25 (CIOD)	← This project
200 psi	21 (CIOD)	

Each standard and random length of pipe shall be factory proof-tested at four times its rated class pressure as listed above for a minimum dwell of 5 seconds.

(2) Joints - Couplings shall be of the elastomeric gasket type, and shall be either of the integral bell type or the doublebell coupling type. The wall thickness of PVC couplings using elastomeric seals shall be adequate to withstand pressure not less than the pressure class rating of the pipe with which they are designed to be used. Couplings shall bear markings as specified in AWWA C900-16.

(3) Valves and Fittings - Fittings for PVC Pipe with 4" I.D. and larger shall be cast iron short body fittings with bell and body metal thickness in accordance with AWWA C500, equal to Mueller. All valves shall be cast iron or brass and shall be specified hereinafter in these specifications. Valves shall be connected to the plastic pipe with adaptors as recommended by the manufacturer.

All connections between plastic pipe and pipe of other material shall be made with adaptors as recommended by the manufacturer. Fittings shall be marked with the NSF seal of approval.

(4) Manufacturer's Representative - The pipe manufacturer shall furnish a representative for one (1) eight-hour day on the job site to instruct and supervise the contractor in the proper method and techniques of installation of the pipe and fittings where more than 200 LF is being installed, unless the Contractor has satisfactorily utilized the exact type of pipe within the past 24 months.

B. POLYETHYLENE PIPE

See these specifications for detailed description of requirements for polyethylene piping.

C. CAST IRON WATER PIPE – DI for use as “yard piping”

(1) Slip Joint Pipe - Pipe sized 3" and larger shall conform to Federal Specs WW-P-421C, or AWWA C-106 of AWWA Standard C-III, with the minimum pipe thickness based on 150 psi working pressure, based on the following working conditions:

- a. Water hammer allowance—2 to 5 feet of cover
- b. Laying condition A—flat bottom trench width w/untamped initial backfill, HS-20 loading.
- c. Design trench width—D + 2 feet
- d. Factor of safety—2.5
- e. Corrosion allowance—0.08 inches
- f. Fe strengths—18,000 psi tensile/40,000 psi modulus of rupture.
- g. Minimum pipe wall thickness--0.35 inches

(2) Ductile Iron Pipe—Ductile cast iron pipe in accordance with AWWA C-150-76 may be used, as a substitution for Cast Iron pipe. Manufacture shall conform with AWWA C-151-76.

Pipe shall be designed in accordance with ANSI Specifications A21.50. Pipe shall be designed for a minimum of 150 psi working pressure, plus 100 psi surge. Other conditions as listed in subsection "(1)" above.

(3) Coatings--Pipe shall be cement lined and seal coated inside and coated outside in accordance with AWWA C-104, latest revision.

Fittings which are not flanged shall have an exterior protective tar coating. Flanged pipe, valves, and fittings shall be given a shop coat of Inertol primer No. 621, or approved equal.

(4) Mechanical joint fittings--Mechanical joint fittings and accessories shall conform to AWWA Standard C-III, with corrosion resistant, high strength alloy steel nuts and bolts.

4—THRUST ANCHORAGE

For all force main lines at 1/8 bends or greater and at tees, caps, plugs, and fittings, restrained joints as shown on the details, or anchor rods shall be provided by the contractor to firmly secure these fittings. Anchor blocks and straps shall be used under valves on plastic pipe in accordance with the manufacturer's standards or recommendations. Concrete thrust blocks may not be substituted without prior consent of the ENGINEER, in which case they shall be of such size and dimensions as detailed on the plans. Concrete for thrust blocks shall not be leaner than 1 to 2.5 (cement to sand ratio), to five (5) parts aggregate, and shall have a compressive strength of $\geq 3,000$ PSI at 28 days. Note "General Construction" article 15 for detailed requirements.

5—VALVE BOXES

Valves boxes for the force main piping system shall be made of cast iron with an inside diameter of not less than five inches (5) and shall have adjustable height. Covers shall be cast with the word "Sewer" printed in raised letters. Boxes shall be suitable for installation at the minimum depths specified. The contractor shall not receive additional compensation for deeper valve boxes unless the valve "bonnet" extension is made necessary by installation of mains at depths 1.0' greater than the depth specified. **Only factory fabricated and approved cast iron extensions will be allowed.**

Valve boxes in nontraffic areas shall be of the two-piece sliding or pipe, equal to Mueller H-10364. For traffic areas, boxes shall be of the three-piece sliding type with the appropriate base, equal to Mueller H-10280.

6—LAYING AND JOINTING SEWER FORCE MAIN PIPE

(A) General: Grading, excavation, and earthwork required in laying sewer force main pipe shall conform to these specifications. Installation of pipe shall be in conformance with provisions of AWWA Standard C600, installation of cast iron water mains, except in cases of conflict with these specifications, in which case these specifications shall govern. When work is suspended either for the night or for any other reason, open ends of pipe shall be securely plugged to prevent the entrance of mud, water, or any foreign material(s).

Dead ends of pipe and unused branches of crosses, tees, valves, etc., shall be closed with plugs suitable to the type of pipe used.

Proper and suitable tools and appliances for the safe convenient handling and laying of pipe shall be used, and care shall be taken to prevent damage to pipe coating. If required by the size of pipe being used, mechanical pullers, (or spreaders) shall be used in conformance with the pipe manufacturer's instructions.

While pipe laying is in progress, the trench shall be kept free from water. [NOTE dewatering requirements per paragraph "E.", "Technical Specifications—Excavation, Trenching, and Backfilling for Utilities"].

While suspended in the sling and before lowering in the trench, the pipe shall be swabbed clean and inspected for defects and tapped with a light hammer to detect cracks. Defective, damaged, or used pipe shall not be used.

7—TESTING FORCE MAIN PIPING

The contractor shall furnish all water, taps, pumps, piping, gauges, and measuring devices for performing all pressure and leakage tests.

(A) *Pressure Test* (1 hour min.):

No pressure tests shall be made until all concrete thrust blocks (if allowed) are seventy-two (72) hours old (minimum).

Before any sewer force mains will be accepted by the engineer, **all lines shall be subjected to hydrostatic pressure of 50 pounds per square inch**, unless required otherwise by the special conditions, for a period of not less than one (1) hour, and any defective work revealed by the test shall be repaired or replaced by the contractor and the system retested.

(B) *Leakage Test* (2 hours min.):

After the pressure test, a separate leakage test shall be conducted for not less than two (2) hours at 50 PSI. The amount of leakage shall not exceed ten (10) gallons per day for each mile of pipe for each inch of diameter.

For example, for a 4,000 LF reach of new 10" force main, maximum allowable leakage is calculated as follows:

$$10 \text{ gallons per day/mile/inch} \times \frac{4,000 \text{ LF}}{5,280 \text{ LF per mile}} \times 10" \times \frac{2 \text{ hours}}{24 \text{ hours per day}} \\ = 6.3 \text{ gallons max. allowable total leakage (during 2 hour leak test)}$$

All visible leaks shall be stopped where leakage is excessive, leak shall be stopped, defects corrected, and pipe shall be re-tested.

8—CONNECTION OF FORCE MAIN(S)/GRAVITY SEWER

At multiple and various locations as shown on the plans, the new/existing sanitary sewer infrastructure shall be connected as follows:

- a. HAEIDD Lift Station (LS#51): The NEW Sewer Force Main shall be tied into the EXISTING HAEIDD Lift Station as indicated on the plans, with *the connection only* payable under bid item "15. Tie-in New/Existing SS to New/Existing SS; per EA": quantity One (1) EACH at this location.
- b. NEW 12" Sewer Force Main near Forbes Farm (Ref. Sheet 8; Station 64+40, approximately): The NEW 12" force main coming from the EXISTING HAEIDD Lift Station shall be tied into an EXISTING 12" FM (previously installed; not in service) as indicated on the plans, payable under bid item "15. Tie-in New/Existing SS to New/Existing SS; per EA": quantity One (1) EACH at this location.
- c. NEW 12" Sewer Force Main near the intersection of Old Covington Highway and Fern Street (Ref. Sheet 7; Station 46+30, approximately): The NEW 12" force main coming from the EXISTING HAEIDD Lift Station shall be tied into an EXISTING 12" FM (previously installed; not in service) as indicated on the plans, payable under bid item "15. Tie-in New/Existing SS to New/Existing SS; per EA": quantity One (1) EACH at this location.
- d. EXISTING SSMH (Ref. Sheet 8, Inset Detail): The NEW 12" force main coming from EXISTING HAEIDD Lift Station shall be tied into an EXISTING SSMH within the EXISTING Hanson Street Lift Station site as indicated on the plans, payable under bid item "15. Tie-in New/Existing SS to New/Existing SS; per EA": quantity One (1) EACH at this location.

The contractor shall verify force main sizes prior to bidding in order to properly bid this contract work item and required tie-ins. The actual tie-in work shall not be accomplished until the Contractor has made sufficient preparations to minimize "out of service" durations. The Contractor shall convene a meeting with the Engineer and the City of Hammond Water and Sewer Department Superintendent to provide details of the tie-in work.

The precise depth, location, fittings, link-seal, and type of pipe/structure to be tied into shall be determined in the field by the Contractor, and payment for which shall be included in bid item "17. Tie-in New/Existing SS to New/Existing SS; per EA", as applicable.

9—AIR RELEASE/VACUUM VALVES

In order to ensure expulsion of entrapped air or to prevent vacuum conditions in the new force main, THE PIPELINE SHALL BE TAPPED IN EIGHT (8) LOCATIONS TO VENT AIR prior to pressure/leak testing. Location of combination air valves will be generally at directional bore

crossings and other abrupt changes in pipe elevation. Exact location(s) of the air release vents shall be determined jointly by the Engineer and Contractor and/or as indicated on the plans.

The costs of the air release valves shall be included in the unit price bid for item "10. Install Combination Air Valve – per EACH".

10—VIDEO INSPECTION RECORD

10.1 GENERAL:

Prior to acceptance, all force main segments shall be inspected by "in-pipe" video inspection to determine the condition and acceptability of the work. The Contractor shall make provisions for access of the video/cleaning equipment into the new force main at sufficient intervals to insure 100% coverage of the video record. This work shall also include cleaning of the new force main and the removal of internal deposits, sludge, dirt, and broken pipe, etc., as required to allow for an unobstructed wastewater path, and for closed circuit televising and videotaping of line sections. The interior of the line sections shall be carefully inspected to determine the condition and location and extent of any breaks, obstacles, and/or "out of round" locations. Such deficiencies shall be corrected by the Contractor at no additional cost to the Owner, and re-videoed if required by the Engineer.

10.2 CLEANING:

Force main lines selected for cleaning/videoing shall be cleaned using the most cost-effective method as determined by the evaluation of accumulated information. A daily log shall be maintained to record the location of the sewer lines cleaned, lengths of the lines cleaned, method of cleaning, line size and volume and type of debris removed.

The equipment that is expected to be used for the majority of the cleaning work on this project is a high velocity sewer cleaner. The Contractor will make two passes of the cleaning nozzle through the line section to prepare the line for TV inspection. If obstructions or "out of round" conditions inhibit adequate cleaning of the line, the Contractor shall notify the Engineer (or his authorized representative) so that appropriate action can be taken. If results of the cleaning are favorable, the Contractor will proceed with the TV inspection. All sludge, dirt, sand, rocks and other solid or semi solid materials resulting from the cleaning operation shall be removed from the section being cleaned.

Material shall be disposed of from the site at the conclusion of each work day (minimum). The Contractor shall be responsible for locating a suitable site for the disposal of materials removed from the sewer system. The Contractor shall identify the disposal site for the information of the Engineer and Owner.

10.3 TELEVISION INSPECTION

The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions. The camera, television monitor, and other components of the video system shall produce a "color" picture quality to the reasonable satisfaction of the Engineer; and if unsatisfactory, the equipment shall be replaced with satisfactory quality producing equipment.

The camera shall be moved through each designated line section in either direction at a moderate rate, stopping when necessary to permit proper documentation of the force main pipe condition. In no case shall the television camera be pulled at a speed greater than 30 feet per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire line section, the Contractor shall set up his equipment so that the inspection can be performed from the opposite manhole at no additional cost to the Owner. If, again, the camera fails to pass through the entire line section because of an obstruction, the inspection shall be considered complete and no additional inspection work will be required.

When manually operated winches are used to pull the television camera through the line section, telephones or other suitable means of communication shall be set up between the two manholes of the line section being inspected to insure good communications between members of the crew.

The importance of accurate distance measurements is emphasized. Measurement for location of defects shall be above ground by means of a meter device. Marking on the cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Accuracy of the distance meter shall be checked by use of a walking meter, roll-a-tape, or other suitable device, and the accuracy shall be satisfactory to the Engineer or his authorized representative.

One (1) videotape recording of each line section investigated shall be made by the Contractor as cleaning and CCTV occurs.

The recording(s) shall provide a complete "color" video and audio record of the entire inspection. The TV unit shall have the capacity of displaying on videotape written information concerning the pipe inspected.

All visual observations shall be recorded by the Contractor on a "Television Inspection Report" form in a format as submitted, and modified/approved by the Engineer. This written record shall provide documentation of the previously recorded information along with documentation of the corrective work accomplished including the following:

- (a) Debris/obstruction(s) removed.
- (b) Roundness of new force main piping.

In lieu of post-installation video inspection, the contractor shall pull a mandrel (in the presence of a representative of the Engineer/Owner) through all completed pipe installed.

In the event that the mandrel cannot be fully pulled in any given segment, the contractor shall initiate corrective measures to ensure that the pipe installed is round and free from obstructions, including video inspection(s) and point repair(s).

11—MEASUREMENT AND PAYMENT

Measurement and payment shall be as noted on the Bid Proposal and further described in these specifications, as completed and accepted in place by the Engineer, which payment shall constitute full compensation for all labor, materials, freight, re-stocking charges (for unused materials), taxes, insurances, equipment, and all associated work reasonably implied to render the project in full compliance with these specifications.

TECHNICAL SPECIFICATIONS

POLYETHYLENE PIPING

1—GENERAL

The work to be done under this section of the specifications includes the installation of polyethylene piping capable of conveying wastewater.

2—MATERIALS

Piping materials and fittings shall be made of a PE 3408 high density, high molecular weight polyethylene piping system in accordance with ASTM D3350, having a cell classification of PE345434C.

Dimensions and workmanship shall be as specified by ASTM F714. The pipe shall be equal to Driscopipe 1000 as manufactured by Phillips Driscopipe, Inc., Richardson, Texas.

All fittings, connections, bends, etc. shall be of the same materials as the pipe, and as recommended by the manufacturer. **All bends shall be of the long sweep type (fabricated) to minimize hydraulic losses.** Where MJ fittings are used, factory approved welded flanges shall be installed to accommodate the MJ fitting, the cost of which shall be included in the unit price bid for the respective bid item as applicable to the installation. The sewer force main lines to be installed (PE-SDR-17 or PE-SDR-11 at creek crossings, LA DOTD road crossings, and public roadway crossings) shall be capable of withstanding 50 psi working pressure. The polyethylene piping installed shall be identified as conveying wastewater in one of the following methods: 1) green stripe located on the axis of the pipe, 2) pipe shall be green in color and/or buried identification tape placed at an appropriate depth above the pipe.

3—WORKMANSHIP

All polyethylene piping shall be laid to the depths at least that as shown or called out on the Construction plans. Trenches shall be as narrow as practicable, to minimize undermining of nearby roadways. Backfill and bedding shall be accomplished using native materials, compacted to at least 90% of Standard Proctor density (AASHTO-99), utilizing the techniques specified in ASTM D-2321.

The pipe/fittings shall be joined by the butt fusion technique, except at the joining of the pipe to other materials, in which case the manufacturer's recommendations shall be followed.

Thrust blocks and vertical thrust blocking/anchorage shall be accomplished as per details, which costs shall be included in the unit price bid for the installation.

All excavated areas shall be neatly dressed and graded to the original contours (including shaping of ditches), with follow-up grading and additional material applied to areas that subside or subsequently settle after backfill work.

The Contractor shall take extreme caution to avoid all adjacent utilities, particularly at highway crossings. The Contractor assumes all responsibility for locating, protecting and avoiding potential conflicts with existing utilities lines. The Contractor shall carefully locate service lines and connections, such as gas, water, and communications, which in most cases are shown schematically on the construction plans for clarity. In general, the new piping shall be hand-tunneled under existing conflicting utilities, unless otherwise approved in the field by the Engineer. In the case of uncovering and/or damaging utilities lines, the Contractor shall immediately contact the affected utility and take all necessary precautions and repair efforts to minimize safety problems and out-of-service periods.

Where boring of uncased/cased PE force main is shown, specified, or required by the Engineer (both "Jack & Bore" and "Directional Bore"), the cost for this work, includes the BORING OPERATIONS ONLY shall be included in the unit price bid for the respective bid item requiring the work and the methods and procedures shall be followed according to that specific section of these technical specifications.

Installation of open cut PVC/PE piping shall conform with these Technical Specifications, in particular the sections entitled "Excavation, Trenching, and Backfilling for Utilities".

All polyethylene piping to PVC connections shall conform with the details. No substitutions or changes in the details are allowed without the prior written approval of the Engineer.

4—TESTING

Completed segments of PE Force Main shall be tested as specified herein, at or near the PE pipe ends, or at reasonable intervals (nominally 1,000' – 1,500' segments), by the installation of welded caps or plugs, to be removed and joined with adjacent segments when both adjoining segments have been satisfactorily tested.

(A) Pressure Test:

No pressure tests shall be made until all concrete thrust blocks (if allowed) are seventy-two (72) hours old (minimum).

Before any lines will be accepted by the engineer, **all lines shall be subjected to hydrostatic pressure of 50 pounds per square inch**, unless required otherwise by the special conditions, for a period of not less than one (1) hour, and any defective work revealed by the test shall be repaired or replaced by the contractor and the system retested.

(B) Leakage Test:

After the pressure test, a separate leakage test shall be conducted for not less than two (2) hours at 50 PSI. The amount of leakage shall not exceed ten (10) gallons per day for each mile of pipe for each inch of diameter.

For example, for a 1,000 LF reach of new 10" force main, maximum allowable leakage is calculated as follows:

$$10 \text{ gallons per day/mile/inch} = \frac{1,000 \text{ LF}}{5,280 \text{ LF per mile}} \times 10 \text{ gallons per day} \times 10" \times \frac{2 \text{ hours}}{24 \text{ hours per day}}$$

= 1.58 gallons max. allowable total leakage for a 1,000 LF segment (during 2 hour leak test)

All visible leaks shall be stopped where leakage is excessive, leak shall be stopped, defects corrected, and pipe shall be re-tested.

5—MEASUREMENT AND PAYMENT

Measurement and payment shall be as noted on the Bid Proposal and further described in these specifications, as completed and accepted in place by the Engineer, which payment shall constitute full compensation for all labor, materials, freight, re-stocking charges (for unused materials), taxes, insurances, equipment, and all associated work reasonably implied to render the project in full compliance with these specifications.

TECHNICAL SPECIFICATIONS

JACK & BORING – DIRECTIONAL BORING

1—DESCRIPTION

The work included under this item consists of furnishing and installing pipe in a bored opening under pavements or any surface intended to be left in service and undisturbed, at the locations shown on the plans or as staked in the field by the Engineer.

2—MATERIALS

Pipe material for bid items “7. Install/open cut 12” Force Main (PE/PVC)” **is included in the unit price bid for bid item “7. Install/open cut 12” Force Main (PE/PVC)**, Boring operations required for bid item “8. Directional Bore (Operations Only) – Ponchatoula Creek Crossing” and bid item “9. Directional Bore (Operations Only) – Project-wide” **is included in the unit price bid for bid item “8. Directional Bore (Operations Only) – Ponchatoula Creek Crossing” and bid item “9. Directional Bore (Operations Only) – Project-wide”.**

The pipe material required for **jacking and boring of PVC Sanitary Sewer Mains** (and service laterals) shall be PVC SDR-35, unless conditions warrant the use of restrained joint PVC. Should restrained joint PVC be necessary (such as bores > 100LF), approved restrained joint PVC is as follows:

- a. C900/RJIB Certa-Lok PVC as manufactured by NAPCO Pipe & Fittings
- b. Fusible PVC as manufactured/represented by Underground Solutions.

The pipe material required for **directional boring of polyethylene Force Mains** shall conform with minimum LaDOTD specifications for “carrier pipe” utility construction within State Highway right-of-ways, unless more restrictive pipe requirements are specified on the plans or within these specifications as found elsewhere in these documents.

POLYETHYLENE PIPE FORCE MAINS								
Jack & Bore— Directional Bore Pipe Specifications	Pipe Diameter							
	¾”-1½”	2”	4”	6”	8”	10”	12”	>12”
SDR-9	X	X						
SDR-11 (a)			X	X	X	X	X	X
SDR-17 (b)			X	X	X	X	X	X
SDR-21 (c)			X	X	X	X	X	X

- (a) Without casing
- (b) Inside of casing
- (c) Sewer force main parallel to highway (or crossing inside a casing)

3—CONSTRUCTION REQUIREMENTS

The pipe shall be jacked, beginning at the either end of the pipe. If the grade at the jacking end is below ground level, suitable pits or trenches shall be excavated for conducting operations and placing joints of pipe. Adequate sheeting and bracing shall be provided to prevent earth caving, at no direct pay.

The jacking method shall be such as not to weaken or damage the embankment. The Contractor shall furnish to the Engineer for approval a plan showing his proposed procedure, including backstop or jacking frame arrangement, pipe guides, position of jacks and jacking head. Approval of this plan shall not relieve the Contractor from his responsibility to obtain the desired result.

Heavy duty jacks suitable for forcing pipe through the embankment shall be provided. Even pressure shall be applied to all jacks and shall be transmitted to the pipe end through a properly designed jacking head. The jacking head shall be so designed that pressure is uniformly distributed around the ring of the pipe. Backstop or jacking frame shall be adequate to resist pressure of the jacks under load. Pipe shall be set on guides, properly fastened together to support the pipe in the proper direction at correct gradient. Suitable cushioning material, such as oakum or plywood, shall be provided between sections of pipe. Should the pipe be visibly or suspiciously damaged during the jacking operations, the contractor shall remove the same and replace with a new joint of pipe.

Material shall be excavated ahead of the pipe and shall be removed through the pipe. Excavation shall not extend more than 2 feet beyond the forward end of the pipe, and if the character of embankment material dictates, the distance shall be reduced to prevent embankment damage.

Excavation on the underside of the pipe, for at least 1/3 the circumference of pipe, shall conform to contour and grade of pipe. A clearance of not more than 2 inches may be provided for the upper 1/2 pipe, tapered to zero at the point where excavation conforms to contour of pipe.

A steel cutting edge may be used around the forward end of pipe, so constructed that it will transmit pressures uniformly around the ring of the pipe.

Once begun, jacking shall continue without interruption, insofar as is practical, to prevent pipe from becoming firmly set in the embankment.

Pipe shall not vary laterally by more than 1 inch in 10 feet from established line and grade; and shall not vary vertically for "on grade" pipe by more than 0.2' per 100 LF of J&B of the required finished elevation(s). Any variation shall be regular and no abrupt changes in direction will be permitted. Any pipe damaged or misaligned in jacking operations shall be removed and replaced by the Contractor at his expense. Abandoned boreholes shall be filled completely with drilling mud or other suitable substance.

Since the full piping network may require certain minimum slope and grade characteristics for gravity flow conduit, extreme care and accuracy is necessary for the completed work to be accomplished within the above-stated tolerances.

A pilot hole approximating the centerline of the single barrel of pipe to be jacked may be installed to determine the existence of buried obstructions to the operations, and to accurately affix the alignment and grade of the subsequent conduit. Should the contract-or choose to forego a pilot hole, the subsequent encountering of sub-surface obstructions shall cause the operations to be relocated at no additional cost to the owner.

4—MEASUREMENT AND PAYMENT

Quantities of Jacked & Bored pipe and directionally bored pipe will be measured by the linear foot of completed barrel of pipe installed within allowable tolerances, in conformity with these specifications, and accepted in place by the Engineer.

Payment for boring work of 12" Force Main, i.e., as bid under bid item "8." and "9.", shall include the **boring operations only**.

Payment under applicable boring bid items shall constitute full compensation for required excavations, barricades, flagmen, shoring, sheeting, bracing, falsework, grouting, miscellaneous materials, boring equipment, all tools, materials, equipment, labor, and incidentals to complete this item of work as shown on the plans, required by the Louisiana Department of Transportation & Development (for work with LADOTD right-of-ways), and otherwise specified herein.

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
FERN STREET:			
Parallel to Fern St.; Perp. crossing of E. Coleman	3	10+00; RT	40
Parallel to Fern St.; Perp. crossing of E. Merry	4	13+64.82; RT	55
Parallel to Fern St.; Perp. crossing to E. Park	4	17+35; RT	65
Diagonal crossing of Fern St.; near Park Ave.	5	20+00; RT LT	100
Parallel to Fern St.	5	21+35; LT	30
Parallel to Fern St.	5,6	22+50-31+50; LT	900
Parallel to Fern St.; Crossing Drainage Lateral	6	31+50-33+50; LT	200
Parallel to Fern St.	7	44+60-46+10; LT	150
	Sub-Total - FERN STREET:		1,540

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
OLD COVINGTON HIGHWAY (OCH):			
Parallel to OCH; Perp. crossing of Covington Ridge Dr.	9	66+00-67+20; LT	120
Parallel to OCH; Perp. crossing of HP Gas	9	68+15-70+15; LT	200
Parallel to OCH; Perp. crossing of Park Ave.	9	72+97-73+57; LT	60
Parallel to OCH; Perp. crossing of residential drive	9	75+00-76+30; LT	130
Parallel to OCH; Perp. crossing of residential drive	10	78+30; LT	40
Parallel to OCH; Perp. crossing of residential drive	10	80+29; LT	40
Parallel to OCH; Perp. crossing of residential drive	10	81+15-81+75; LT	60
Parallel to OCH; Perp. crossing of Arbordale	10	84+33-84+93; LT	60
Parallel to OCH; Perp. crossing of residential drive	11	88+15-93+95; LT	600
Perpendicular crossing of OCH	11	94+00; RT	40
Parallel to OCH; Perp. crossing of residential drive	12	97+25-98+40; RT	115
Parallel to OCH; Perp. crossing of W. Pleasant Ridge	12	98+85-99+65; RT	80
Parallel to OCH; Perp. crossing of residential drive	12	101+20; RT	35
Parallel to OCH; Perp. crossing of residential drive	12	102+98; RT	50
Parallel to OCH; Perp. crossing of residential drive	12	104+62; RT	50
Parallel to OCH; Perp. crossing of residential drive	12	106+10; RT	50
	Sub-Total - OLD COVINGTON HIGHWAY:		1,730

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
EAST PLEASANT RIDGE (EPR):			
Parallel to EPR; Perp. crossing of residential drive	13	108+90-109+00; LT	110
Parallel to EPR; Perp. crossing of residential drive	13	110+48; LT	40
Parallel to EPR; Perp. crossing of residential drive	13	111+70; LT	50
Parallel to EPR; Perp. crossing of residential drive	13	112+77; LT	40
Parallel to EPR; Perp. crossing of resi. dr. w/ subsurface drainage	14	119+00-121+00; LT	200
Parallel to EPR; Perp. crossing of residential drive	14	121+87; LT	30
Parallel to EPR; Perp. crossing of residential drive	14	123+60; LT	30
Parallel to EPR; Perp. crossing of residential drive	14	125+73; LT	30
Parallel to EPR; Perp. crossing of residential drive	14	127+05; LT	30
Parallel to EPR; Perp. crossing of residential drive	14	128+15; LT	40
Parallel to EPR; Perp. crossing of residential drive	14	129+67; LT	30
Parallel to EPR; Perp. crossing of residential drive	15	130+95; LT	30
Parallel to EPR; Perp. crossing of residential drive	15	132+90; LT	40
Parallel to EPR; Perp. crossing of residential drive	15	135+00; LT	40
Parallel to EPR; Perp. crossing of residential drive	15	137+50; LT	40
Parallel to EPR; Perp. crossing of drainage ditch	15	138+34-138+84; LT	50
Parallel to EPR; Perp. crossing of drainage ditch	15	141+10-141+90; LT	80
Parallel to EPR; Perp. crossing of landscaped area	16	143+15-145+15; LT	200
Parallel to EPR; Perp. crossing of resi. dr./landscaped area/trees	16	145+95; LT	35
Parallel to EPR; Perp. crossing of residential drive	16	148+87; LT	40
Parallel to EPR; Perp. crossing of residential drive	16	150+38; LT	40
Parallel to EPR; Perp. crossing of residential drive	16	151+04-151+44; LT	40
Parallel to EPR; Perp. crossing of residential drive	16,17	152+75-155+00; LT	225
Parallel to EPR; Perp. crossing of resi. dr./landscaped area/trees	17	156+08; LT	45
Parallel to EPR; Perp. crossing of residential drive	17	157+50; LT	45
Sub-Total - EAST PLEASANT RIDGE:			1,580

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
FRONTAGE ROAD (FR):			
Parallel to FR; Perp. crossing of resi. dr.	17	159+83; LT	45
Parallel to FR; Perp. crossing of resi. dr.	17	163+30; LT	40
Parallel to FR; Perp. crossing of resi. dr.	17	164+19; LT	75
Parallel to FR; Perp. crossing of resi. dr.	17	165+91; LT	35
Parallel to FR; Perp. crossing of resi. dr.	18	168+17-169+17; LT	100
Parallel to FR; Perp. crossing of resi. dr.	18	169+62; LT	35
Parallel to FR; Perp. crossing of resi. dr.	18	171+48; LT	35
Parallel to FR; Perp. crossing of resi. dr.	18	172+60; LT	30
Parallel to FR; Perp. crossing of resi. dr.	18	173+58; LT	50
Parallel to FR; Perp. crossing of resi. dr.	18	176+37; LT	100
Parallel to FR; Perp. crossing of drainage canal/lateral + resi. dr.	19	178+51; LT	50
Parallel to FR; Perp. crossing of Loyds Lane	19	180+50; LT	50
Parallel to FR; Perp. crossing of resi. dr.	20	192+30; LT	40
Parallel to FR; Perp. crossing of resi. dr.	20	193+00; LT	25
Perpendicular crossing of Frontage Road	20	193+30; LT	40
Sub-Total - FRONTAGE ROAD:			750

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
AIRPORT ROAD (LA 3158) (AR):			
Perpendicular crossing of Airport Road (LA 3158)	20	194+45; 40' RT	135
Sub-Total - AIRPORT ROAD:			135

DESCRIPTION	Directional Bore 12" (PE/PVC) FORCE MAIN		
	Plan Sheet No.	STATION	Length of Bore
HI PARK BLVD:			
Parallel to Hi Park Blvd; Perpendicular to residential drive	21	195+45-195+85; RT	40
Parallel to Hi Park Blvd; Perpendicular to residential drive	21	197+17-197+87; RT	70
Parallel to Hi Park Blvd; Perpendicular to residential drive	21	201+73-202+43; RT	70
Sub-Total - HI PARK BLVD:			180

Total Theoretical Bore Quantity - Linear Feet:	5,915
---	--------------

Bore Quantity

PERMIT

24-51712

Permit Number



Tangipahoa Parish - Building Inspections and Permits

15485 W Club Deluxe Rd, Hammond, LA 70403

Telephone: (985) 542-2117 Website: www.tangipahoa.org

Permit Type Road Boring Permit		Issue Date 3/8/2024
Project Address Fern Street Hammond LA 70403	Payment ID 13116055	Permit Fee \$50.00
Project Name City of Hammond		
Project Description Water and Sewer		
Property Owner City of Hammond - Guy Palermo	Mobile #	Work #
Applicant Spangler Engineering, LLC - Jay Pittman	Mobile # 9852641309	Work #
General Contractor Spangler Engineering, LLC - Jay Pittman P.O. Box 1374 Hammond, LA 70404	Mobile # 9852641309	Work #
	E-mail Address jay@spanglerengineering.com	
Square Feet 1.00	Construction Cost (Job Estimated Value) 1.00	Stories
Zoning	Subdivision	Lot Number
Flood Zone	Structure Type	
Applicant Signature:		

PERMIT MUST BE POSTED FOR DURATION OF CONSTRUCTION

1. I acknowledge that this permit becomes null and void if work or construction is not commenced within 180 days and/or if construction stalls for more than 180 days at any time. I have read and examined this document in its entirety and have completed the appropriate sections of this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulation construction or the performance of construction. The proposed work is authorized by the owner of record and that I am or have been authorized by the owner to make this application as the authorized agent and agree to conform to all applicable laws of this jurisdiction.
2. See page 2 for required inspection sequence

Three (3) copies of the drawings must accompany the utility permit application.

When applicable, the following supplements are also required and shall become a part of this permit: Bridge Attachment, Pipe Data Sheet or Certification for Permit Lighting.

ENTERED IN COMPUTER FILE

PERMIT NUMBER 62035489

CONTROL 454 SECTION 03

INITIAL AND DATE

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
UTILITY PERMIT

(Required by State Law) Rev 3/23

A copy of this permit shall be available at the site where and when work is performed.

Whereas CITY OF HAMMOND

(Print or type name of applicant)

hereinafter termed applicant, requests a permit for the use and occupancy of the right-of-way of State Highway No. I-12 North Frontage Rd

in TANGIPAHOA Parish, located as follows:

from: INTERSECTION I-12 NORTH FRONTAGE RD & E. PLEASANT RIDGE RD Lat: 30.479429 Long: -90.424810
to: INT. N. FRONTAGE RD AND LA 3158 (AIRPORT RD) Lat: 30.481061 Long: -90.414641

(in Decimal Degrees, e.g. Lat:-30.459, Long: -91.178)

for the installation, operation, and maintenance of the following described project (please summarize and use additional sheets as necessary):

Parallel with 12" dia sewer force main (PE/PVC) buried w/ 5' cover over top of pipe and 3' min. clear under drainage structures, ditches & utilities as shown on attached drawings & Pipe Data Sheets. (Polyethylene req'd. crossing roadways & canals) SDR-11 PE req'd. crossing Frontage Rd at Sta 193+24 (see Section B-B attached)

Estimated number of times this facility will be accessed each year after construction has been completed, including meter readings: 12

By signing this permit, applicant/permittee hereby acknowledges receiving a copy of the permit, the general conditions and standards, the Standards for the Installation of Pipelines on State Highways, and the Standards for the Installation of Supply and Communication Lines on State Highways, and agrees to comply with all provisions contained therein and all applicable laws, rules and regulations.

DOTD USE ONLY:

Permit is subject to Attachment A and the following conditions (use additional sheets as necessary):

**BEFORE YOU DIG
CALL LA 811
OR 1-800-272-3020**

RECOMMENDED FOR APPROVAL

(Check box if review required)

[Signature] 3/5/24

District Permit Specialist / Date

(Signed)

Permit must be signed by the owner or lessee of the property. Contractor may NOT require permit

Guy Palermo 3-1-24

(Owner) (Date)

(Printed or Typed)

District Traffic Operation Engineer / Date

(Name of Person Signing Permit)
Supt. Water & Sewer Dept. City of Hammond

(Title)

18104 Hwy 190 E

(Street or P.O. Box)

Hammond La 70401

(City or Town) (State) (Zip Code)

985-277-5962

(Telephone Number)

Palermo-Gl@Hammond.org

(E-mail Address)

District Administrator (or Designee) / Date

Print Name

Applicant must notify District Permit Specialist at phone number: Berne @ 985-375-0195 Grant prior to beginning work and after work is completed.

Final inspection and approval by: _____

Issue Date: 3/5/24

Installation to be completed by: 3/5/24 (Date)

DOTD APPROVAL:

[Signature] 3/6/24

Headquarters Right-of-Way Permit Engineer / Date or

District Administrator (or Designee) / Date

Print Name Jennifer D Branton

HEADQUARTERS (original)

pc: DISTRICT

pc: PERMITTEE
Page 1 of 5

3
2520

The following general conditions and standards shall apply:

FIRST: That, the rights and privileges granted herein shall be nonexclusive and shall not be construed to be any broader than those expressly set out in Acts of the Legislature of the State of Louisiana, regardless of the language used in this permit and that any facilities placed on the highway right-of-way shall be placed in accordance with existing laws and the standards of the Department.

SECOND: That, all facilities thereto, after having been erected, shall at all times be subject to inspection and the right is reserved to require such changes, additions, repairs, relocations and removal as may at any time be considered necessary to permit the relocation, reconstruction, widening and maintaining of the highway and to provide proper and safe protection to life and property on or adjacent to the highway, or in the interest of safety to traffic on the highway and that the cost of making such changes, additions, repairs and relocations shall be borne by the applicant, and that all of the cost of the work to be accomplished under this permit shall be borne by the permittee who agrees to hold the Department harmless therefore.

THIRD: That, the proposed facilities or their operation or their maintenance shall not unreasonably interfere with the facilities or the operation or maintenance of the facilities of other persons, firms or corporations previously issued permits of use and occupancy, and the proposed facilities shall not be dangerous to persons or property using or occupying the highway or using facilities constructed under previously granted permits of use and occupancy; and that the Department's records of prior permits are available, it being the duty of the applicant to determine the existence and location of all facilities within the highway right of way.

FOURTH: That, installations within the highway right-of-way shall be in accordance with applicable provisions contained in the following: AASHTO Guide for Accommodating Utilities within Highway Right of Way, Code of Federal Regulations 23 (CFR 23), National Electrical Safety Code C2, 1996 Federal Telecommunications Act. Those facilities not included in the above mentioned documents shall be in accordance with accepted practice. Where standards of the Department exceed those of the above cited codes, the standards of the Department shall apply. The Department reserves the right to modify its policies as may be required if conditions warrant.

FIFTH: That, data relative to the proposed location, relocation and design of fixtures or appurtenances as may be required by the Department shall be furnished to the Department by the applicant free of cost, and that the applicant shall make any and all changes or additions necessary to make the proposed facilities thereto satisfactory to the Department.

SIXTH: That, cutting and trimming of trees, shrubs, etc., shall be in accordance with the Department's EDSM IV 2.1.6 and Vegetation Manual, as revised.

SEVENTH: The applicant shall indemnify and save harmless the Department, its officers, agents, employees, contractors and assigns against any and all costs, expenses, claims, losses, liabilities, demands, suits, causes of action, damages, and judgments of any sums of money to any party accruing against the Department, its officers, agents, employees, contractors and assigns, growing out of, resulting from, or by reason of the presence or operation of the proposed facilities or any act or omission of the applicant, its officers, employees, agents, contractors and assigns while engaged in, about, or in connection with the discharge or performance of the terms of this permit or the operation, maintenance and use of the proposed facilities, whether by the applicant or third parties. Such indemnification shall include, without limitation, attorney's fees, court costs, fines, penalties, legal, consulting, accounting, engineering, and other expenses. The applicant shall provide and bear the expenses of all personal, professional, or other applicable insurance related to its ownership and operation of the proposed facilities and its duties arising under the permit.

EIGHTH: That, the applicant is the owner of the facility for which a permit is requested, and is responsible for maintenance of such: and any permit granted by the Department is granted only insofar as the Department had the power and right to grant the same.

NINTH: That, any permit granted by the Department is subject to revocation at any time.

TENTH: That, signing for warning and protection of traffic in instances where workmen, equipment or materials are in close proximity to the roadway surfacing, shall be in accordance with requirements contained in the Department's Manual on Uniform Traffic Control Devices. No vehicles, equipment and/or materials shall operate from, or be parked, stored or stock piled on any highway, median, or in an area extending from the outer edge of the shoulder of the highway on one side to the outer edge of the shoulder of the highway on the opposite side or in the median of any divided highway.

ELEVENTH: That, all provisions and standards contained herein relative to the installation of utilities shall apply to future operation, service and maintenance of utilities.

TWELFTH: That, drainage in highway side and cross ditches must be maintained at all times. The entire highway right of way affected by work under a permit must be restored to as good a condition as existed prior to beginning work to the complete satisfaction of the Department's R/W Permit Engineer.

THIRTEENTH: Any non-metallic or non-conductive underground facility must be installed with a non-corrosive metallic wire or tape placed directly over and on the center of the facility for its entire length within highway right-of-way. Wire or tape must be connected to all facilities.

FOURTEENTH: Prior to performing any excavations, the applicant is required to call Louisiana One Call. If installing any underground facilities such as cable or conduits, the applicant must be a member of Louisiana One Call. In addition, the applicant must contact DOTD at DOTD-FiberLocates@la.gov at least 24 hours prior to performing any excavation on DOTD Right-of-way (either for installation or maintenance).

STANDARDS FOR THE INSTALLATION OF PIPELINES ON STATE HIGHWAYS

- A. GENERAL
- (1) All materials and workmanship shall conform to the requirements of the applicable industry code and to Department specifications.
 - (2) All safety precautions for the protection of the traveling public must be observed. Undue delay to traffic will not be tolerated.
 - (3) All excavations within the limits of the right-of-way shall be backfilled and tamped in six inch layers to the density of the adjacent undisturbed soil. Where sod is removed or destroyed, it shall be replaced. Where it is necessary to make excavations in the shoulder, the top six inches of backfill shall be sand-clay gravel or equivalent. Where existing spoil material is, at the discretion of the Department, unsuitable for backfill, select material shall be furnished in lieu thereof and the existing material disposed of by approved methods.
 - (4) Protruding valves and other above ground appurtenances shall not be installed at any point within the right of way of the highway except for vents, markers, etc., which may be installed at the right-of-way line, unless specifically approved herein.
- B. PARALLEL TO THE HIGHWAY (All provisions of general standards to apply.)
- (1) Pipelines paralleling the highway:
 - (a) shall occupy the last few feet of the right-of-way back of the ditch except where upon showing of actual necessity a permit is issued for another location;
 - (b) shall have a minimum earth cover of twenty-four (24) inches;
 - (c) shall have a minimum clearance of twenty-four (24) inches below existing or proposed drainage structures, where possible.
 - (2) Utilities paralleling the highway are limited to distribution facilities.
- C. CROSSING THE HIGHWAY (All provisions of general standards apply.)
- (1) Uncased pipelines may be permitted, provided the conditions outlined in E.D.S.M. IV 2.1.9 are met.
 - (2) If the permittee elects to use casing, it must extend from right-of-way to right-of-way, and be properly vented and marked at or beyond the right-of-way line.
 - (3) For cased pipelines, the casing shall have at least four (4) feet of cover below the roadway and two (2) feet of cover below ditches or drainage structures. Uncased pipelines shall have at least five (5) feet and three (3) feet of cover respectively.
 - (4) Crossings shall be made at as nearly right angles to the highway as possible. No existing drainage structure under the highway may be used for this purpose.
 - (5) Construction methods used shall be in accordance with the following requirements:
 - (a) Cutting the surface or tunneling under it is specifically prohibited.
 - (b) Installation shall be made either by boring or jacking under and through the highway at least from ditch bottom to ditch bottom. In the absence of ditches, or along sections of highway with curb or gutter, boring or jacking shall extend beyond the outside edge of the traveled way to a point at least equal to three (3) times the vertical difference between the elevation of the roadway surfacing and the elevation of the top of the cable. Where width of right-of-way is insufficient to enable compliance with this requirement or where it is necessary to make a connection to an existing parallel facility which precludes compliance, the distance shall be to the right-of-way line or to the parallel facility. Any voids or overbreaks resulting from this shall be backfilled with grout consisting of a cement mortar or slurry of fine sand or clay, as conditions require. Excavating an open ditch to the edge of the pavement and boring and jacking the remainder of the distance is prohibited. Jacking and boring shall be done in accordance with Section 728 of the La. Standard Specifications for Roads and Bridges, latest edition.
- D. REMOVAL AND ABANDONMENT OF UTILITY FACILITIES
- (1) All facilities installed within state highway right-of-way shall be removed and disposed of by their owner as soon as they stop serving a useful purpose. Facilities may be abandoned under the following circumstances:
 - (a) Pipelines and casings crossing highways or other hard surfaces may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer.
 - (b) Pipelines and casings installed along highways, may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that they are less than 6 inches in diameter, or that they are buried with more than 8 feet or cover.
 - (c) Electrical and communication facilities installed within a casing, and crossing under highways or other hard surfaces may be abandoned in place with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that the cable is removed from the casing.
 - (d) Uncased cables crossing under highways or other hard surfaces may be abandoned in place provided that they are removed to a point as near to the edge of the highway as feasible.

- (e) Electrical and communication cables installed along highways may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that they are less than 4 inches in diameter, or that they are buried with more than 8 feet of cover.
 - (f) All above ground facilities installed along state highways shall be removed and disposed of by their owner as soon as they stop serving a useful purpose.
 - (g) Facilities that are located so that their removal would be likely to result in damage to the highway, or to other facilities, may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer. The procedure for abandoning these facilities will be specified on a case-by-case basis; however, in general, sections shall be removed here possible, and all remaining lines shall be filled with grout.
- (2) Where it is not possible nor feasible to remove pipelines and/or casings under existing highways, such pipelines and/or casings may be abandoned in place provided removals shall be accomplished by the owner, as near to the highway on each side as possible and in all cases, beyond existing ditches to right-of-way lines, and further provided that all pipelines and/or casings abandoned under the highway shall be abandoned in accordance with D.O.T. Title 49 (i.e., pipelines are purged, capped, and filled with grout; note that when highway construction will remove the line in the near future, the DOTD's project engineer may approve the use of water in place of grout).
 - (3) Pipelines and cables shall be removed from abandoned casings where possible.
 - (4) In all cases the highway right-of-way shall be repaired, at the permittee's expense, to match DOTD standards. An approved backfill material shall be used to fill in any trenches or low areas, and shall be compacted to the same density as the surrounding soil. Any desirable trees or shrubs that are damaged shall be replaced, and any other damages (i.e. to subsurface drainage, traffic signs, etc.) shall be repaired.
 - (5) Companies who fail to comply with this by leaving their facilities within highway right-of-way after they are no longer used, or by not repairing the right-of-way after removing their facilities, shall not receive any permits until the situation is rectified.
 - (6) In cases where the DOTD decides that it is necessary to remove a facility and/or to repair highway right-of-way damaged by a utility or the utility's facility, the company shall be invoiced for costs to the DOTD for removing abandoned facilities, or for repairing damaged right-of-way. Unpaid invoices shall be referred to DOTD's accounting section for further action.
 - (7) Note that a recommendation for abandonment by the project engineer is required only on construction projects. The district construction engineer should be consulted by the district utility and permit specialist when an abandonment may cause a potential problem with future construction. The assistant district administrator should be consulted by the district utility and permit specialist when an abandonment may cause a potential maintenance problem.
 - (8) The owner of the abandoned facilities shall maintain full responsibility for any future problems caused by the facilities, and shall remove the facilities upon receiving a written request from the DOTD. The cost of removing these facilities shall be borne by the owner and the DOTD shall assume no liability for this cost.

STANDARDS FOR THE INSTALLATION OF SUPPLY AND COMMUNICATION LINES ON STATE HIGHWAYS

- A. All pole lines shall occupy the last few feet of the right-of-way behind the ditch but shall be no further from the right-of-way line than one-half of the width of the cross-arms plus one foot, except where upon a showing of actual necessity a permit is issued for another location.
- B. A minimum vertical clearance of twenty (20) feet shall be maintained between the traveled surface of the highway and any aerial installation. In no case shall the vertical clearance for an overhead utility line be less than the clearance required by the National Electrical Safety Code. A minimum clearance of sixteen (16) feet shall be maintained between existing ground elevation and any aerial installation when such installation is within highway right-of-way but does not cross the traveled surface of a highway.
- C. Where supply and/or communication lines are placed underground, the standards for pipelines shall govern. Underground electric facilities must have at least four (4) feet of cover and must be encased when crossing a highway. These facilities must also be adequately marked by appropriate signs at specified locations.

ATTACHMENT A

62035489

The applicant/permittee hereby acknowledges and agrees that the following, additional special conditions and standards shall apply:

FIRST: That, the applicant/permittee shall not conduct any activities within twenty (20) feet from the edge of travel lane without written authorization obtained by the LA DOTD.

SECOND: That, the applicant/permittee expressly shall not have the authority to close a lane, unless granted by the LA DOTD.

THIRD: That, for regularly scheduled maintenance, the applicant/permittee shall notify the LA DOTD in writing of any access to the right-of-way, at least fourteen (14) days in advance when such access is for regularly scheduled maintenance. Applicant/permittee acknowledges that the failure to comply with these notification requirements may result in permit revocation.

FOURTH: That, for emergency maintenance, the applicant/permittee shall notify the LA DOTD in writing of any access to the right-of-way as soon as is practically known, but in any event, at least concurrently with the emergency event. Applicant/permittee acknowledges that the failure to comply with these notification requirements may result in permit revocation.

FIFTH: That, the applicant/permittee's access to right-of-way shall be in compliance with all existing laws and regulations and shall not adversely impact traffic.

SIXTH: That, the applicant/permittee shall be responsible for all of LA DOTD's assets that are damaged or affected in any manner, and shall be required to restore the right-of-way and/or affected facility to the condition that it was previously in prior to access.

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
UTILITY PERMIT SUPPLEMENT

Rev 1/17

PIPE DATA SHEET

Highway No. I-12 North Frontage Road Owner of Proposed Facility CITY OF HAMMOND

Data	Carrier Pipe	Casing (If Used)
Contents to be handled	SAN. SEWER	
Pipe Material	PE	
Specification & Grade of Pipe	Astm F-714	
Outside Diameter (inches)	12.75	
Dimension Ratio (DR) for Non-Metallic Pipe	SDR 11	
Nominal Pipe Size (NPS) (inches)	12	
Wall Thickness(inches)	0.49	
Specified Minimum Yield Strength (SMYS) (PSI)	160	
Average Temperature of Transmittant	73 F	
Hydrostatic Design Basis (HDB) (PSI) for Non-Metallic Carrier Pipe	60	
*^Maximum Allowable Operating Pressure (MAOP) (PSI)	not regulated	
Surge Pressure Allowance (PSI) for Pipe Carrying Liquid	100	
^Class Location	not regulated	
Type of Joint (welded, mechanical, etc.)	welded	
Method of Installation (bore, open cut, horizontal directional drilling, etc.)	open cut /dir. bore	
Location (crossing or parallel)	parallel	
Crossing Angle (if crossing highway)	0	
Minimum Depth beneath roadway surface (feet)	5 <i>N/A</i>	
Minimum Depth beneath ditches or drainage structures (feet)	3 <i>N/A</i>	
Pipe Vertical Deflection by Spangler Equation (inches)	astm D1784	
Coating Material	none	
Cathodic Protection	none	

*This is not design pressure. MAOP is the highest pressure a pipeline may be operated under US DOT regulations.

^Required for all pipelines (liquid and gas) except those not regulated by US DOT (i.e. water, sewage, brine, etc.).

This proposed installation is in compliance with Louisiana Department of Transportation and Development Standards.

Guy Palero

3-1-24

(Signature of Owner, required)

(Date)

Headquarters (original)

pc: District

pc: Permittee

STATE OF LOUISIANA
 DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
UTILITY PERMIT SUPPLEMENT
 Rev 1/17
PIPE DATA SHEET

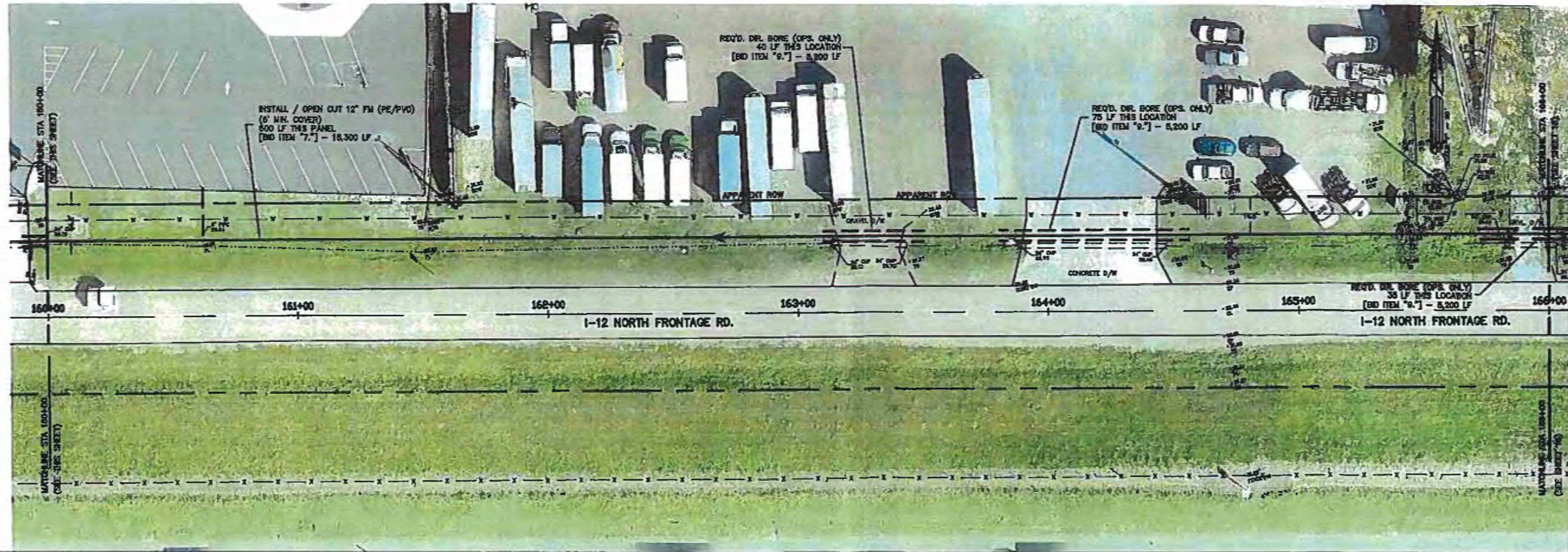
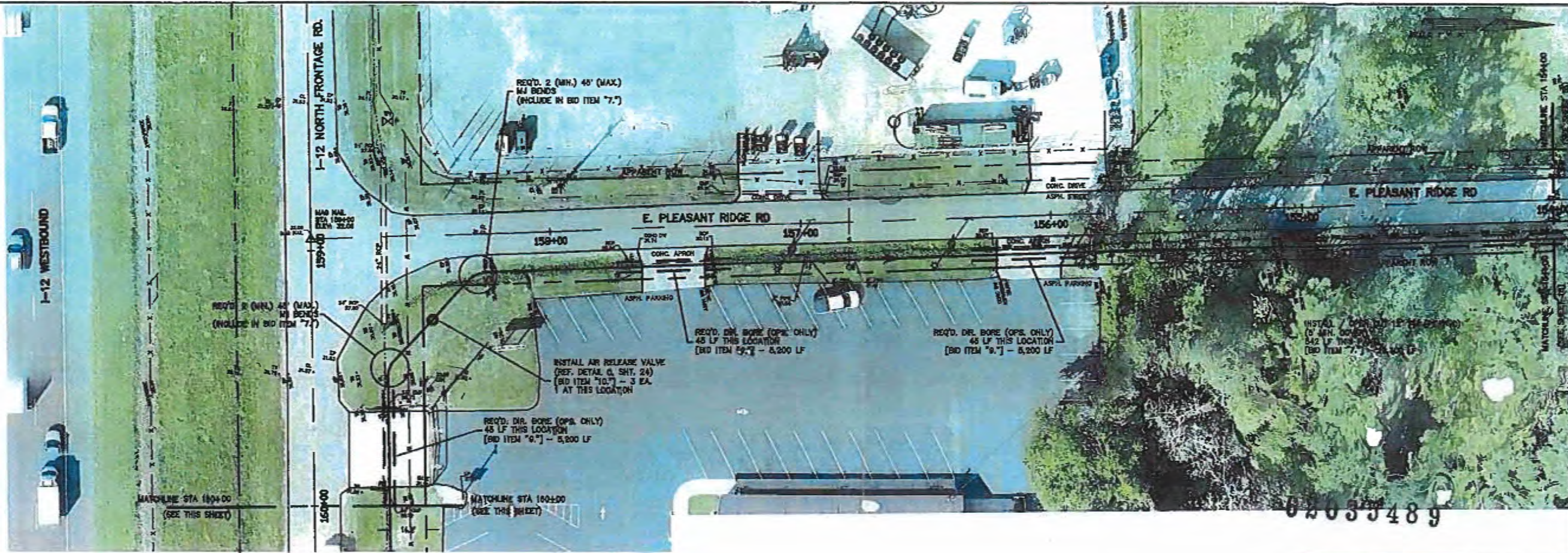
Highway No. I-12 north Frontage Rd Owner of Proposed Facility CITY OF HAMMOND

Data	Carrier Pipe	Casing (If Used)
Contents to be handled	san. sewer	
Pipe Material	PVC	
Specification & Grade of Pipe	AWWA C-900	
Outside Diameter (inches)	12.75	
Dimension Ratio (DR) for Non-Metallic Pipe	DR 35	
Nominal Pipe Size (NPS) (inches)	12	
Wall Thickness(inches)	0.49	
Specified Minimum Yield Strength (SMYS) (PSI)	160	
Average Temperature of Transmittant	73 F	
Hydrostatic Design Basis (HDB) (PSI) for Non-Metallic Carrier Pipe	60	
*^Maximum Allowable Operating Pressure (MAOP) (PSI)	not regulated	
Surge Pressure Allowance (PSI) for Pipe Carrying Liquid	100	
^Class Location	not regulated	
Type of Joint (welded, mechanical, etc.)	mechanical	
Method of Installation (bore, open cut, horizontal directional drilling, etc.)	open cut / bore	
Location (crossing or parallel)	parallel	
Crossing Angle (if crossing highway)	n/a	
Minimum Depth beneath roadway surface (feet)	n/a	
Minimum Depth beneath ditches or drainage structures (feet)	3	
Pipe Vertical Deflection by Spangler Equation (inches)	astm D1784	
Coating Material	none	
Cathodic Protection	none	

*This is not design pressure. MAOP is the highest pressure a pipeline may be operated under US DOT regulations.
 ^Required for all pipelines (liquid and gas) except those not regulated by US DOT (i.e. water, sewage, brine, etc.).

This proposed installation is in compliance with Louisiana Department of Transportation and Development Standards.

Guy Palermo 3-1-24
 (Signature of Owner, required) (Date)
 Headquarters (original) pc: District



GENERAL NOTE:
 UTILITIES LOCATIONS ARE SCHEMATIC ONLY, AND SHOULD NOT BE RELIED UPON FOR ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH AFFECTED UTILITY DIRECTLY AND MARKING THE LINES LOCATED IN THE FIELD, PRIOR TO EXCAVATIONS IN THE VICINITY OF ANY POTENTIAL CONFLICT. HAND WORK MAY BE NECESSARY WHEN CROSSING OR CLOSELY PARALLELING ANOTHER LINE.
 LA ONE CALL TICKETS: 24000223, 24000224, 24000225



SCALE: 1" = 20'
 DATE: 3-21-2024
 DRAWN: ROH
 CHECKED: J.C.P.
 REVISED:

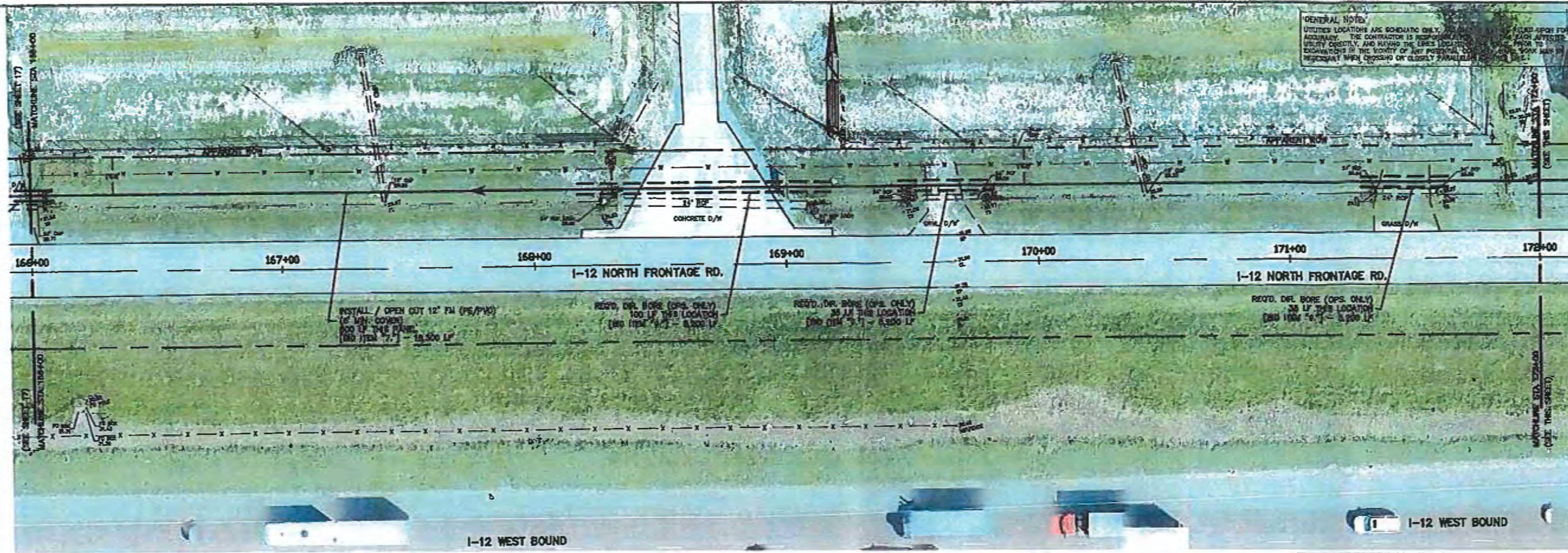
E. PLEASANT RIDGE RD.

HAEIDD LIFT STATION AND
 FORCE MAIN IMPROVEMENTS
 [FY 2024]
 for the
 CITY OF HAMMOND

Spangler Engineering, LLC
 CONSULTING CIVIL ENGINEERS
 214 S.W. RAILROAD AVENUE
 P.O. BOX 1374
 HAMMOND, LOUISIANA 70404
 (985) 542-8845 FAX: (985) 542-0048

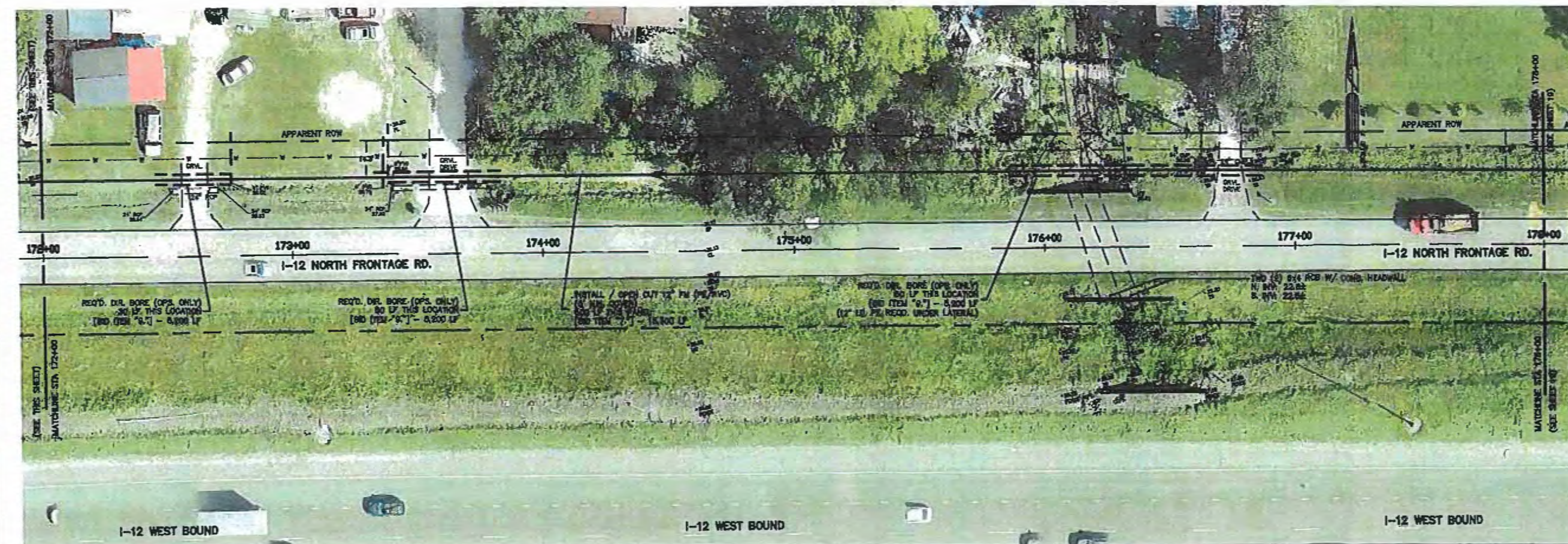
SHEET
17

K:\2023 LAND PROJECTS\HAMM HAEIDD LS 51 & FM Impv 2023\PLANS 2023 RDHFORCE MAIN.dwg, 3/5/2024 8:32:58 AM



SCALE: 1" = 20'
 DATE: 3-21-2024
 DRAWN: RDH
 CHECKED: J.C.P.
 REVISED:

I-12 NORTH FRONTAGE ROAD



62035489

HAEIDD LIFT STATION AND
 FORCE MAIN IMPROVEMENTS
 [FY 2024]
 for the
 CITY OF HAMMOND

Spangler Engineering, LLC
 CONSULTING CIVIL ENGINEERS
 214 S.W. RAILROAD AVENUE
 P.O. BOX 1374 70404
 HAMMOND, LOUISIANA
 (985) 542-8665 FAX: (985) 542-0046

SHEET
18

K:\2023 LAND PROJECTS\HAMM HAEIDD LS 51 & FM Impv 2023\PLANS 2023 RDH\FORCE MAIN.dwg, 3/5/2024 8:34:12 AM



SCALE: 1" = 20'
 DATE: 3-21-2024
 DRAWN: RDH
 CHECKED: J.C.P.
 REVISED:

I-12 NORTH FRONTAGE ROAD

HAEIDD LIFT STATION AND
 FORCE MAIN IMPROVEMENTS
 [FY 2024]
 for the
 CITY OF HAMMOND

Spangler Engineering, LLC
 CONSULTING CIVIL ENGINEERS
 214 S.W. RAILROAD AVENUE
 HAMMOND, LOUISIANA 70404
 (985) 542-8865 FAX: (985) 542-0046

SHEET
19

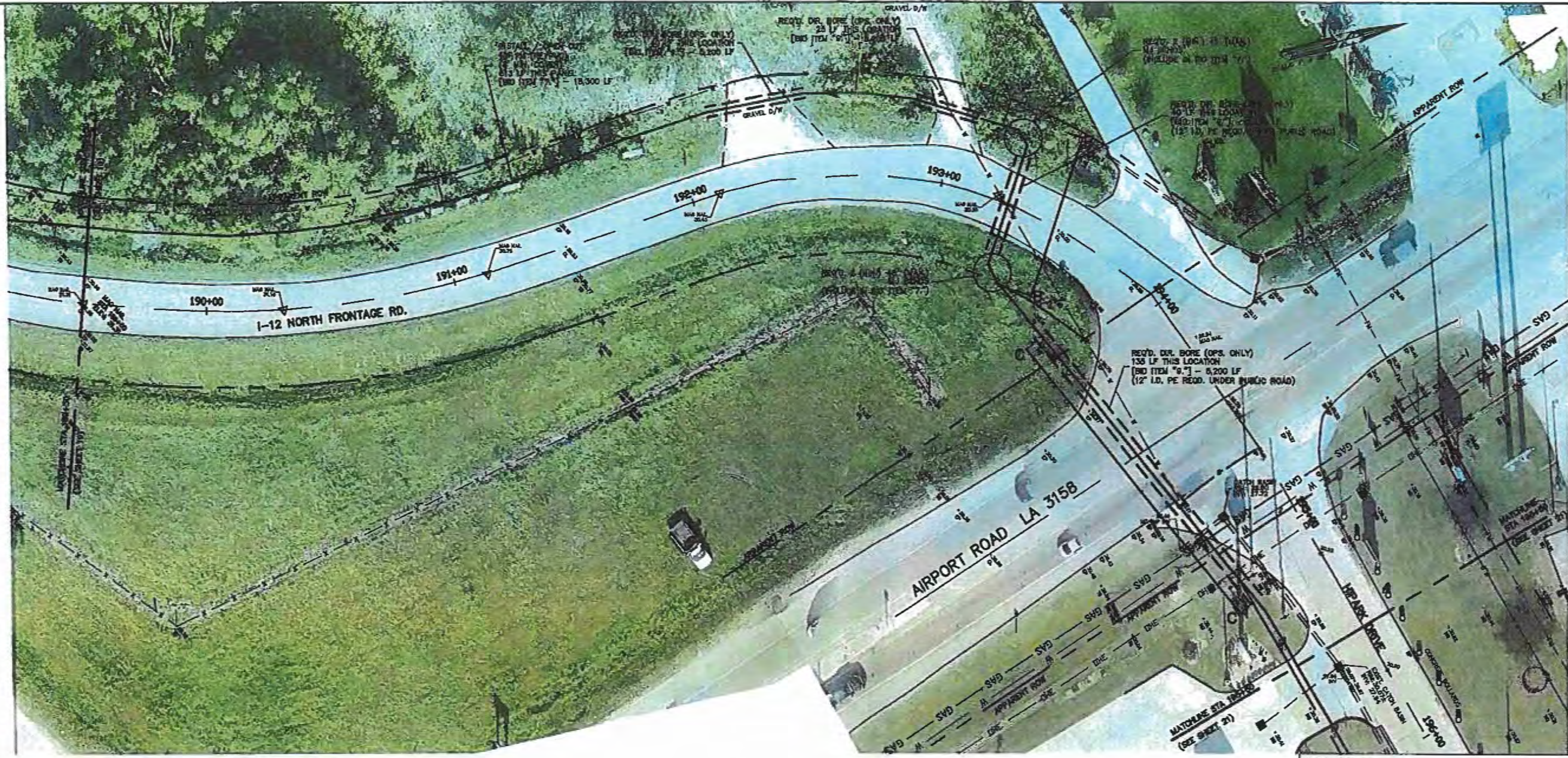
I-12 WEST BOUND ON RAMP
 FROM EXIT 42 (LA 3158)

62035489

GENERAL NOTE:
 UTILITIES LOCATIONS ARE SOLELY FOR INFORMATION ONLY, AND SHOULD NOT BE RELIED UPON FOR
 ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH APPLICABLE
 UTILITY DIRECTLY AND MARKING THE LINES LOCATIONS IN THE FIELD PRIOR TO
 EXCAVATIONS IN THE VICINITY OF ANY POTENTIAL UTILITIES. FIELD WORK MAY BE
 NECESSARY WHEN CROSSING OR CLOSELY PARALLEL TO THE LINE.

LA ONE CALL TICKETS: 24000223, 24000224, 24000225

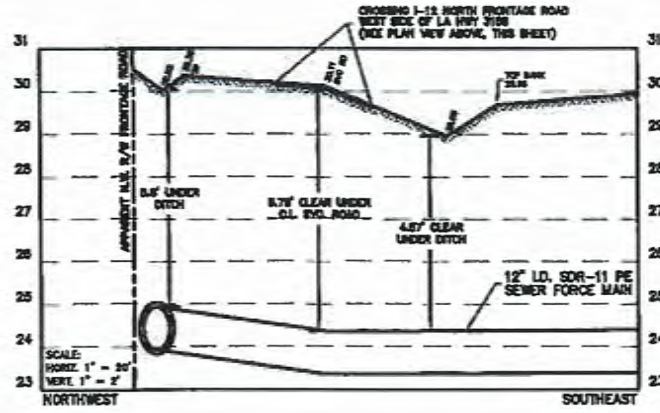
K:\2023 LAND PROJECTS\HAMM HAEIDD LS 51 & FM Impv 2023\PLANS 2023 RDH\FORCE MAIN.dwg, 3/5/2024 8:35:20 AM



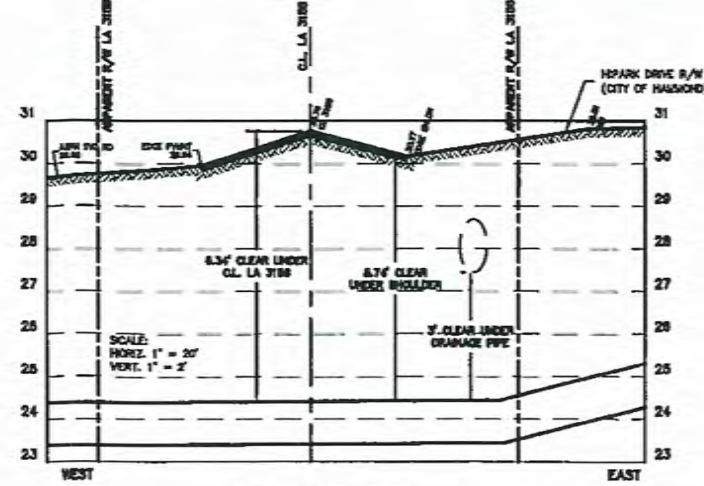
SCALE: 1" = 20'
 DATE: 3-21-2024
 DRAWN: RDH
 CHECKED: J.C.P.
 REVISED:

I-12 NORTH FRONTAGE ROAD
 AT LA HWY 3158
 (AIRPORT ROAD)

HAEIDD LIFT STATION AND
 FORCE MAIN IMPROVEMENTS
 [FY 2024]
 for the
 CITY OF HAMMOND



SECTION B-B
 REQ'D. DIRECTIONAL BORE
 12" I.D. SDR-11 POLYETHYLENE
 SEWER FORCE MAIN CROSSING I-12 NORTH FRONTAGE ROAD
 WITH 8' MIN. CLEARANCE UNDER ROADWAY
 AND 3' MIN. UNDER DITCHES & DRAINAGE STRUCTURES



SECTION C-C
 REQ'D. DIRECTIONAL BORE
 12" I.D. SDR-11 POLYETHYLENE
 SEWER FORCE MAIN CROSSING LA HWY 3158
 WITH 8' MIN. CLEARANCE UNDER ROADWAY
 AND 3' MIN. UNDER DITCHES & DRAINAGE STRUCTURES

GENERAL NOTE:
 UTILITY LOCATIONS ARE SCHEMATIC ONLY, AND SHOULD NOT BE RELIED UPON FOR ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH AFFECTED UTILITY DIRECTLY, AND HAVING THE LINES LOCATED IN THE FIELD, PRIOR TO EXCAVATIONS IN THE VICINITY OF ANY POTENTIAL CONFLICT. HAND WORK MAY BE NECESSARY WHEN CROSSING OR CLOSELY PARALLELING ANOTHER LINE.
 LA ONE CALL TICKETS: 24000221, 24000224, 24000225

9 0 0 0 7 1 0 9
 6 2 0 3 5 4 8 9

Spangler Engineering, LLC
 CONSULTING CIVIL ENGINEERS
 214 S.W. RAILROAD AVENUE
 P.O. BOX 1374
 HAMMOND, LOUISIANA 70404
 (985) 542-8865 FAX: (985) 542-0045

SHEET
20

Three (3) copies of the drawings must accompany the utility permit application.

When applicable, the following supplements are also required and shall become a part of this permit: Bridge Attachment, Pipe Data Sheet or Certification for Permit Lighting.

ENTERED IN COMPUTER FILE

PERMIT NUMBER 62035487

CONTROL 853 SECTION 39

INITIAL AND DATE

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
UTILITY PERMIT

(Required by State Law) Rev 3/23

A copy of this permit shall be available at the site where and when work is performed.

Whereas CITY OF HAMMOND

(Print or type name of applicant)

hereinafter termed applicant, requests a permit for the use and occupancy of the right-of-way of State Highway No. La Hwy 3158

in TANGIPAHOA Parish, located as follows:

from: INTERSECTION of I-12 NORTH FRONTAGE RD & La Hwy 3158

Lat: 30.481098

Long: -90.414617

to: INT. La 3158 & Hipark Drive

Lat: 30.481102

Long: -90.414413

(in Decimal Degrees, e.g. Lat -30.459, Long -91.178)

for the installation, operation, and maintenance of the following described project (please summarize and use additional sheets as necessary):

Crossing La 3158 with 12" dia SDR-11 PE sewer force main buried w/ 5' cover over top of pipe and 3' min. clear under drainage structures, as shown on attached drawings & Pipe Data Sheets. (see Section C-C attached)

Estimated number of times this facility will be accessed each year after construction has been completed, including meter readings: 12

By signing this permit, applicant/permittee hereby acknowledges receiving a copy of the permit, the general conditions and standards, the Standards for the Installation of Pipelines on State Highways, and the Standards for the Installation of Supply and Communication Lines on State Highways, and agrees to comply with all provisions contained therein and all applicable laws, rules and regulations.

DOTD USE ONLY:

Permit is subject to Attachment A and the following conditions (use additional sheets as necessary):

BEFORE YOU DIG
CALL LA ONE 811
OR 800 878-8828

RECOMMENDED FOR APPROVAL
(Check box if review required)

District Permit Specialist / Date

(Signed)

Permit must be signed by the owner or lessee of the property.
Contractor may NOT acquire permit

Guy Palermo 3-1-24
(Owner) (Date)

District Traffic Operation Engineer / Date

(Printed or Typed)

Guy Palermo
(Name of Person Signing Permit)

Supt. Water & Sewer Dept. City of Hammond
(Title)

District Administrator (or Designee) / Date
Print Name

Insp. Grant Berne

18104 Hwy 190 E
(Street or P.O. Box)

Hammond La 70401
(City or Town) (State) (Zip Code)

985-277-5962
(Telephone Number)

palermo-g1@hammond.org
(Email Address)

Applicant must notify District Permit ~~Specialist~~
at phone number: 985-375-0195
prior to beginning work and after work is completed.

3
DAYS

Final inspection and approval by: _____

Issue Date: 3-5-24

Installation to be completed by: 9-5-24
(Date)

DOTD APPROVAL:

Jennifer D. Branton 3/6/24
Headquarters Right-of-Way Permit Engineer / Date or
District Administrator (or Designee) / Date

Print Name Jennifer D. Branton

The following general conditions and standards shall apply:

FIRST: That, the rights and privileges granted herein shall be nonexclusive and shall not be construed to be any broader than those expressly set out in Acts of the Legislature of the State of Louisiana, regardless of the language used in this permit and that any facilities placed on the highway right-of-way shall be placed in accordance with existing laws and the standards of the Department.

SECOND: That, all facilities thereto, after having been erected, shall at all times be subject to inspection and the right is reserved to require such changes, additions, repairs, relocations and removal as may at any time be considered necessary to permit the relocation, reconstruction, widening and maintaining of the highway and to provide proper and safe protection to life and property on or adjacent to the highway, or in the interest of safety to traffic on the highway and that the cost of making such changes, additions, repairs and relocations shall be borne by the applicant, and that all of the cost of the work to be accomplished under this permit shall be borne by the permittee who agrees to hold the Department harmless therefore.

THIRD: That, the proposed facilities or their operation or their maintenance shall not unreasonably interfere with the facilities or the operation or maintenance of the facilities of other persons, firms or corporations previously issued permits of use and occupancy, and the proposed facilities shall not be dangerous to persons or property using or occupying the highway or using facilities constructed under previously granted permits of use and occupancy; and that the Department's records of prior permits are available, it being the duty of the applicant to determine the existence and location of all facilities within the highway right of way.

FOURTH: That, installations within the highway right-of-way shall be in accordance with applicable provisions contained in the following: AASHTO Guide for Accommodating Utilities within Highway Right of Way, Code of Federal Regulations 23 (CFR 23), National Electrical Safety Code C2, 1996 Federal Telecommunications Act. Those facilities not included in the above mentioned documents shall be in accordance with accepted practice. Where standards of the Department exceed those of the above cited codes, the standards of the Department shall apply. The Department reserves the right to modify its policies as may be required if conditions warrant.

FIFTH: That, data relative to the proposed location, relocation and design of fixtures or appurtenances as may be required by the Department shall be furnished to the Department by the applicant free of cost, and that the applicant shall make any and all changes or additions necessary to make the proposed facilities thereto satisfactory to the Department.

SIXTH: That, cutting and trimming of trees, shrubs, etc., shall be in accordance with the Department's EDSM IV 2.1.6 and Vegetation Manual, as revised.

SEVENTH: The applicant shall indemnify and save harmless the Department, its officers, agents, employees, contractors and assigns against any and all costs, expenses, claims, losses, liabilities, demands, suits, causes of action, damages, and judgments of any sums of money to any party accruing against the Department, its officers, agents, employees, contractors and assigns, growing out of, resulting from, or by reason of the presence or operation of the proposed facilities or any act or omission of the applicant, its officers, employees, agents, contractors and assigns while engaged in, about, or in connection with the discharge or performance of the terms of this permit or the operation, maintenance and use of the proposed facilities, whether by the applicant or third parties. Such indemnification shall include, without limitation, attorney's fees, court costs, fines, penalties, legal, consulting, accounting, engineering, and other expenses. The applicant shall provide and bear the expenses of all personal, professional, or other applicable insurance related to its ownership and operation of the proposed facilities and its duties arising under the permit.

EIGHTH: That, the applicant is the owner of the facility for which a permit is requested, and is responsible for maintenance of such: and any permit granted by the Department is granted only insofar as the Department had the power and right to grant the same.

NINTH: That, any permit granted by the Department is subject to revocation at any time.

TENTH: That, signing for warning and protection of traffic in instances where workmen, equipment or materials are in close proximity to the roadway surfacing, shall be in accordance with requirements contained in the Department's Manual on Uniform Traffic Control Devices. No vehicles, equipment and/or materials shall operate from, or be parked, stored or stock piled on any highway, median, or in an area extending from the outer edge of the shoulder of the highway on one side to the outer edge of the shoulder of the highway on the opposite side or in the median of any divided highway.

ELEVENTH: That, all provisions and standards contained herein relative to the installation of utilities shall apply to future operation, service and maintenance of utilities.

TWELFTH: That, drainage in highway side and cross ditches must be maintained at all times. The entire highway right of way affected by work under a permit must be restored to as good a condition as existed prior to beginning work to the complete satisfaction of the Department's R/W Permit Engineer.

THIRTEENTH: Any non-metallic or non-conductive underground facility must be installed with a non-corrosive metallic wire or tape placed directly over and on the center of the facility for its entire length within highway right-of-way. Wire or tape must be connected to all facilities.

FOURTEENTH: Prior to performing any excavations, the applicant is required to call Louisiana One Call. If installing any underground facilities such as cable or conduits, the applicant must be a member of Louisiana One Call. In addition, the applicant must contact DOTD at DOTD-FiberLocates@la.gov at least 24 hours prior to performing any excavation on DOTD Right-of-way (either for installation or maintenance).

STANDARDS FOR THE INSTALLATION OF PIPELINES ON STATE HIGHWAYS**A. GENERAL**

- (1) All materials and workmanship shall conform to the requirements of the applicable industry code and to Department specifications.
- (2) All safety precautions for the protection of the traveling public must be observed. Undue delay to traffic will not be tolerated.
- (3) All excavations within the limits of the right-of-way shall be backfilled and tamped in six inch layers to the density of the adjacent undisturbed soil. Where sod is removed or destroyed, it shall be replaced. Where it is necessary to make excavations in the shoulder, the top six inches of backfill shall be sand-clay gravel or equivalent. Where existing spoil material is, at the discretion of the Department, unsuitable for backfill, select material shall be furnished in lieu thereof and the existing material disposed of by approved methods.
- (4) Protruding valves and other above ground appurtenances shall not be installed at any point within the right of way of the highway except for vents, markers, etc., which may be installed at the right-of-way line, unless specifically approved herein.

B. PARALLEL TO THE HIGHWAY (All provisions of general standards to apply.)

- (1) Pipelines paralleling the highway:
 - (a) shall occupy the last few feet of the right-of-way back of the ditch except where upon showing of actual necessity a permit is issued for another location;
 - (b) shall have a minimum earth cover of twenty-four (24) inches;
 - (c) shall have a minimum clearance of twenty-four (24) inches below existing or proposed drainage structures, where possible.
- (2) Utilities paralleling the highway are limited to distribution facilities.

C. CROSSING THE HIGHWAY (All provisions of general standards apply.)

- (1) Uncased pipelines may be permitted, provided the conditions outlined in E.D.S.M. IV 2.1.9 are met.
- (2) If the permittee elects to use casing, it must extend from right-of-way to right-of-way, and be properly vented and marked at or beyond the right-of-way line.
- (3) For cased pipelines, the casing shall have at least four (4) feet of cover below the roadway and two (2) feet of cover below ditches or drainage structures. Uncased pipelines shall have at least five (5) feet and three (3) feet of cover respectively.
- (4) Crossings shall be made at as nearly right angles to the highway as possible. No existing drainage structure under the highway may be used for this purpose.
- (5) Construction methods used shall be in accordance with the following requirements:
 - (a) Cutting the surface or tunneling under it is specifically prohibited.
 - (b) Installation shall be made either by boring or jacking under and through the highway at least from ditch bottom to ditch bottom. In the absence of ditches, or along sections of highway with curb or gutter, boring or jacking shall extend beyond the outside edge of the traveled way to a point at least equal to three (3) times the vertical difference between the elevation of the roadway surfacing and the elevation of the top of the cable. Where width of right-of-way is insufficient to enable compliance with this requirement or where it is necessary to make a connection to an existing parallel facility which precludes compliance, the distance shall be to the right-of-way line or to the parallel facility. Any voids or overbreaks resulting from this shall be backfilled with grout consisting of a cement mortar or slurry of fine sand or clay, as conditions require. Excavating an open ditch to the edge of the pavement and boring and jacking the remainder of the distance is prohibited. Jacking and boring shall be done in accordance with Section 728 of the La. Standard Specifications for Roads and Bridges, latest edition.

D. REMOVAL AND ABANDONMENT OF UTILITY FACILITIES

- (1) All facilities installed within state highway right-of-way shall be removed and disposed of by their owner as soon as they stop serving a useful purpose. Facilities may be abandoned under the following circumstances:
 - (a) Pipelines and casings crossing highways or other hard surfaces may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer.
 - (b) Pipelines and casings installed along highways, may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that they are less than 6 inches in diameter, or that they are buried with more than 8 feet of cover.
 - (c) Electrical and communication facilities installed within a casing, and crossing under highways or other hard surfaces may be abandoned in place with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that the cable is removed from the casing.
 - (d) Uncased cables crossing under highways or other hard surfaces may be abandoned in place provided that they are removed to a point as near to the edge of the highway as feasible.

- (e) Electrical and communication cables installed along highways may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer, provided that they are less than 4 inches in diameter, or that they are buried with more than 8 feet of cover.
 - (f) All above ground facilities installed along state highways shall be removed and disposed of by their owner as soon as they stop serving a useful purpose.
 - (g) Facilities that are located so that their removal would be likely to result in damage to the highway, or to other facilities, may be abandoned in place, with the recommendation of the district utility and permit specialist and the project engineer, and with the approval of the headquarters utility and permit engineer. The procedure for abandoning these facilities will be specified on a case-by-case basis; however, in general, sections shall be removed here possible, and all remaining lines shall be filled with grout.
- (2) Where it is not possible nor feasible to remove pipelines and/or casings under existing highways, such pipelines and/or casings may be abandoned in place provided removals shall be accomplished by the owner, as near to the highway on each side as possible and in all cases, beyond existing ditches to right-of-way lines, and further provided that all pipelines and/or casings abandoned under the highway shall be abandoned in accordance with D.O.T. Title 49 (i.e., pipelines are purged, capped, and filled with grout; note that when highway construction will remove the line in the near future, the DOTD's project engineer may approve the use of water in place of grout).
 - (3) Pipelines and cables shall be removed from abandoned casings where possible.
 - (4) In all cases the highway right-of-way shall be repaired, at the permittee's expense, to match DOTD standards. An approved backfill material shall be used to fill in any trenches or low areas, and shall be compacted to the same density as the surrounding soil. Any desirable trees or shrubs that are damaged shall be replaced, and any other damages (i.e. to subsurface drainage, traffic signs, etc.) shall be repaired.
 - (5) Companies who fail to comply with this by leaving their facilities within highway right-of-way after they are no longer used, or by not repairing the right-of-way after removing their facilities, shall not receive any permits until the situation is rectified.
 - (6) In cases where the DOTD decides that it is necessary to remove a facility and/or to repair highway right-of-way damaged by a utility or the utility's facility, the company shall be invoiced for costs to the DOTD for removing abandoned facilities, or for repairing damaged right-of-way. Unpaid invoices shall be referred to DOTD's accounting section for further action.
 - (7) Note that a recommendation for abandonment by the project engineer is required only on construction projects. The district construction engineer should be consulted by the district utility and permit specialist when an abandonment may cause a potential problem with future construction. The assistant district administrator should be consulted by the district utility and permit specialist when an abandonment may cause a potential maintenance problem.
 - (8) The owner of the abandoned facilities shall maintain full responsibility for any future problems caused by the facilities, and shall remove the facilities upon receiving a written request from the DOTD. The cost of removing these facilities shall be borne by the owner and the DOTD shall assume no liability for this cost.

STANDARDS FOR THE INSTALLATION OF SUPPLY AND COMMUNICATION LINES ON STATE HIGHWAYS

- A. All pole lines shall occupy the last few feet of the right-of-way behind the ditch but shall be no further from the right-of-way line than one-half of the width of the cross-arms plus one foot, except where upon a showing of actual necessity a permit is issued for another location.
- B. A minimum vertical clearance of twenty (20) feet shall be maintained between the traveled surface of the highway and any aerial installation. In no case shall the vertical clearance for an overhead utility line be less than the clearance required by the National Electrical Safety Code. A minimum clearance of sixteen (16) feet shall be maintained between existing ground elevation and any aerial installation when such installation is within highway right-of-way but does not cross the traveled surface of a highway.
- C. Where supply and/or communication lines are placed underground, the standards for pipelines shall govern. Underground electric facilities must have at least four (4) feet of cover and must be encased when crossing a highway. These facilities must also be adequately marked by appropriate signs at specified locations.

ATTACHMENT A

The applicant/permittee hereby acknowledges and agrees that the following, additional special conditions and standards shall apply:

FIRST: That, the applicant/permittee shall not conduct any activities within twenty (20) feet from the edge of travel lane without written authorization obtained by the LA DOTD.

SECOND: That, the applicant/permittee expressly shall not have the authority to close a lane, unless granted by the LA DOTD.

THIRD: That, for regularly scheduled maintenance, the applicant/permittee shall notify the LA DOTD in writing of any access to the right-of-way, at least fourteen (14) days in advance when such access is for regularly scheduled maintenance. Applicant/permittee acknowledges that the failure to comply with these notification requirements may result in permit revocation.

FOURTH: That, for emergency maintenance, the applicant/permittee shall notify the LA DOTD in writing of any access to the right-of-way as soon as is practically known, but in any event, at least concurrently with the emergency event. Applicant/permittee acknowledges that the failure to comply with these notification requirements may result in permit revocation.

FIFTH: That, the applicant/permittee's access to right-of-way shall be in compliance with all existing laws and regulations and shall not adversely impact traffic.

SIXTH: That, the applicant/permittee shall be responsible for all of LA DOTD's assets that are damaged or affected in any manner, and shall be required to restore the right-of-way and/or affected facility to the condition that it was previously in prior to access.

STATE OF LOUISIANA
 DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
UTILITY PERMIT SUPPLEMENT
 Rev 1/17
PIPE DATA SHEET

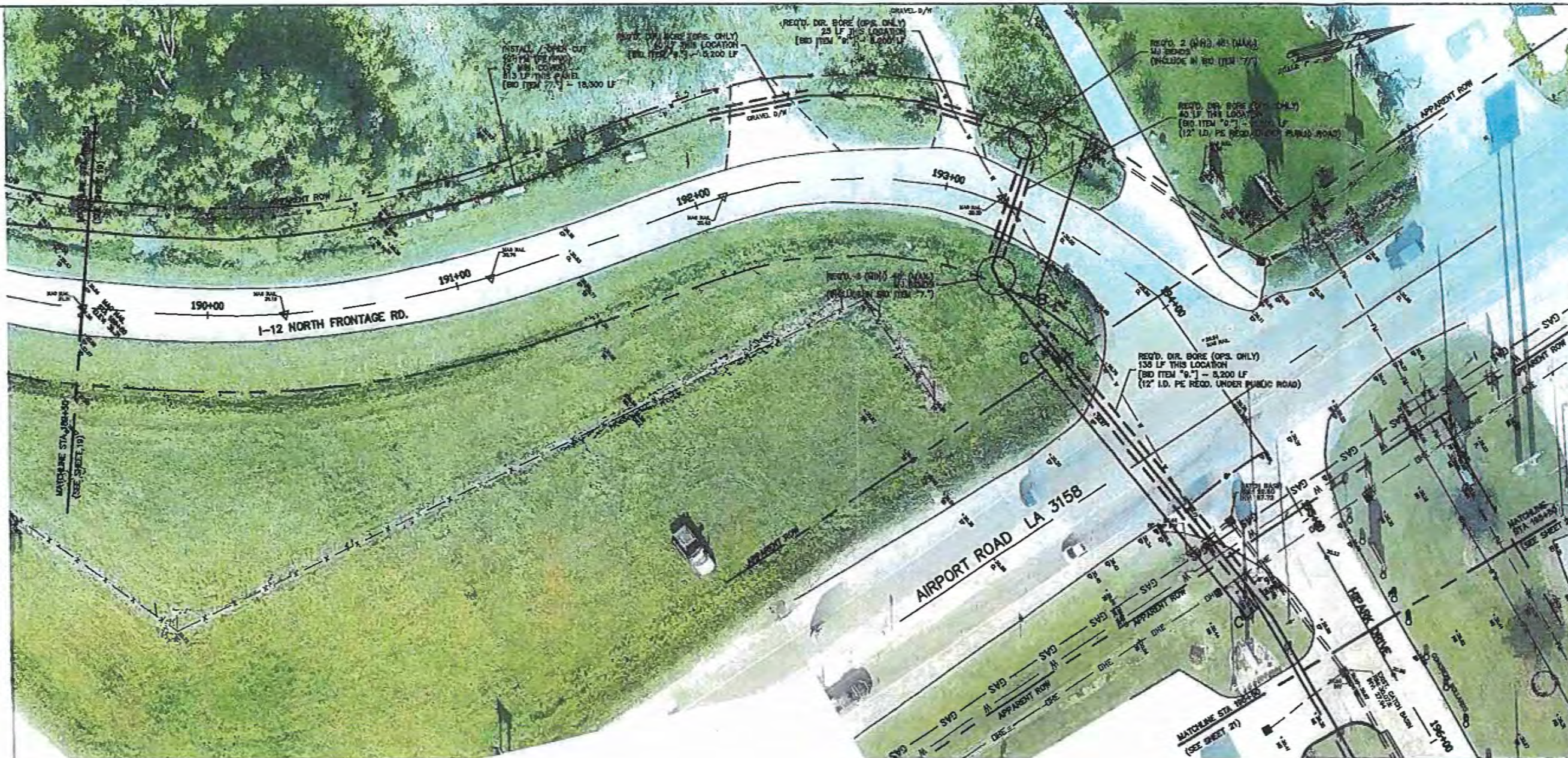
Highway No. La 3158 Owner of Proposed Facility _____

Data	Carrier Pipe	Casing (If Used)
Contents to be handled	SAN. SEWER	
Pipe Material	PE	
Specification & Grade of Pipe	Astm F-714	
Outside Diameter (inches)	12.75	
Dimension Ratio (DR) for Non-Metallic Pipe	SDR 11	
Nominal Pipe Size (NPS) (inches)	12	
Wall Thickness(inches)	0.49	
Specified Minimum Yield Strength (SMYS) (PSI)	160	
Average Temperature of Transmittant	73 F	
Hydrostatic Design Basis (HDB) (PSI) for Non-Metallic Carrier Pipe	60	
*^Maximum Allowable Operating Pressure (MAOP) (PSI)	not regulated	
Surge Pressure Allowance (PSI) for Pipe Carrying Liquid	100	
^Class Location	not regulated	
Type of Joint (welded, mechanical, etc.)	welded	
Method of Installation (bore, open cut, horizontal directional drilling, etc.)	dir. bore	
Location (crossing or parallel)	crossing	
Crossing Angle (if crossing highway)	10 degrees max	
Minimum Depth beneath roadway surface (feet)	5	
Minimum Depth beneath ditches or drainage structures (feet)	3	
Pipe Vertical Deflection by Spangler Equation (inches)	astm D1784	
Coating Material	none	
Cathodic Protection	none	

*This is not design pressure. MAOP is the highest pressure a pipeline may be operated under US DOT regulations.
 ^Required for all pipelines (liquid and gas) except those not regulated by US DOT (i.e. water, sewage, brine, etc.).

This proposed installation is in compliance with Louisiana Department of Transportation and Development Standards.

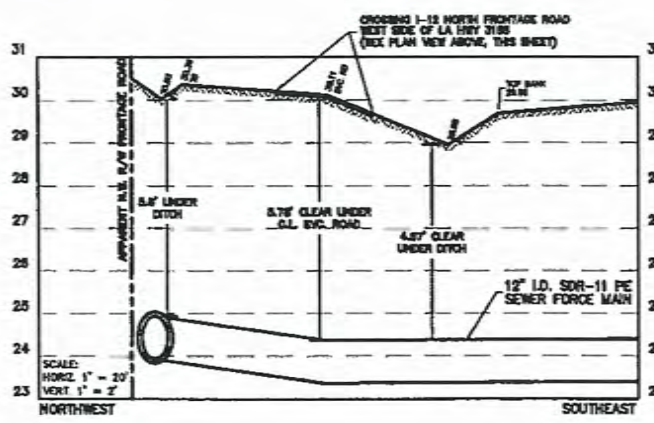
Cmy P... 3-1-24
 (Signature of Owner, required) (Date)
 Headquarters (original) pc: District



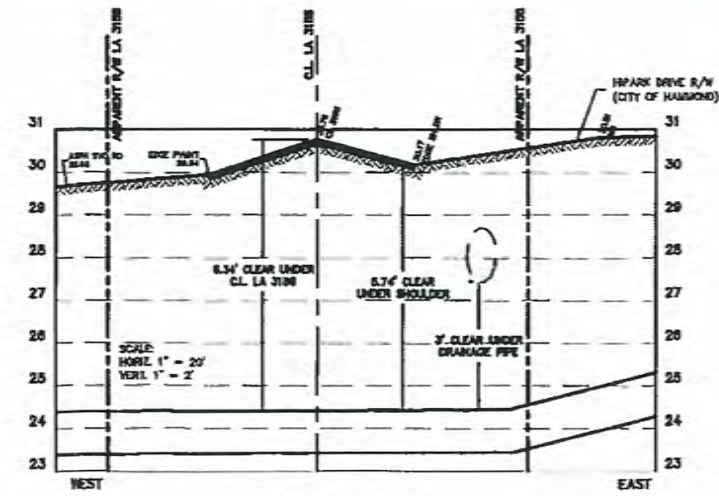
SCALE: 1" = 20'
 DATE: 2-15-2024
 DRAWN: RDH
 CHECKED: J.C.P.
 REVISED:

I-12 NORTH FRONTAGE ROAD
 AT LA HWY 3158
 (AIRPORT ROAD)

HAEMDD LIFT STATION AND
 FORCE MAIN IMPROVEMENTS
 [FY 2024]
 for the
 CITY OF HAMMOND



SECTION B-B
 REQ'D. DIRECTIONAL BORE
 12" LD. SDR-11 POLYETHYLENE
 SEWER FORCE MAIN CROSSING I-12 NORTH FRONTAGE ROAD
 WITH 5' MIN. CLEARANCE UNDER ROADWAY
 AND 3' MIN. UNDER DITCHES & DRAINAGE STRUCTURES



SECTION C-C
 REQ'D. DIRECTIONAL BORE
 12" LD. SDR-11 POLYETHYLENE
 SEWER FORCE MAIN CROSSING LA HWY 3158
 WITH 5' MIN. CLEARANCE UNDER ROADWAY
 AND 3' MIN. UNDER DITCHES & DRAINAGE STRUCTURES

GENERAL NOTE:
 UTILITIES LOCATIONS ARE SCHEMATIC ONLY, AND SHOULD NOT BE RELIED UPON FOR
 ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH AFFECTED
 UTILITY DIRECTLY, AND HAVING THE LINES LOCATED IN THE FIELD, PRIOR TO
 EXCAVATIONS IN THE VICINITY OF ANY POTENTIAL CONFLICT. PUNCH WORK MAY BE
 NECESSARY WHEN CROSSING OR CLOSELY PARALLELING ANOTHER LINE.
 LA ONE CALL TISS#S 24000223, 240002814, 240002825

62035487



Spangler Engineering, LLC
 CONSULTING CIVIL ENGINEERS
 214 S.W. RAILROAD AVENUE
 P.O. BOX 1374
 HAMMOND, LOUISIANA 70404
 (985) 542-8865 FAX: (985) 542-0046

SHEET
20