

SPECIFICATIONS AND CONTRACT DOCUMENTS

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

**CLAY COUNTY UTILITY AUTHORITY
MIDDLEBURG, FLORIDA**

CCUA BID NO. 18/19-A7



**Clay County Utility Authority
3176 Old Jennings Road
Middleburg, Florida 32068
(904) 272-5999**

April 2019

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CCUA Bid No. 18/19-A7

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REQUEST FOR BIDS

NOTICE IS HEREBY GIVEN that the Clay County Utility Authority (AUTHORITY), Clay County, Florida, will be accepting sealed Bids in triplicate, which will be received until 2:00 p.m., (local time), May 9, 2019, at the Clay County Utility Authority, 3176 Old Jennings Road, Middleburg, Florida 32068-3907 for the following:

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract CCUA BID NO. 18/19-A7

The Selected Contractor shall furnish, unless otherwise noted, all necessary permits, labor, equipment and materials to complete the following:

- This is a five (5) year continuing contract for work that consists of furnishing all labor, materials and equipment necessary to rehabilitate sanitary sewers, manholes and/or wetwells. Owner shall furnish construction plans to identify the work for which purchase orders will be issued.

Bidders may bid on any or all Parts but must provide unit pricing for each item in any Part they intend to bid. The Owner will evaluate the bids and determine which bid is in its best interest and the award will be made to the Bidder with the highest ranking based on the items of consideration in Article 19 of Section 00200 Instructions to Bidders.

All materials, methods of construction, and standards must be in accordance with the AUTHORITY's approved material manual, specs, and details.

Certified minority business enterprises or minority persons are encouraged to timely submit their bid for this project consistent with the terms of this Notice. Due consideration also will be given to bidders, other than certified minority business enterprises or minority persons, whose bid contains a written plan or summary outlining their intended efforts to use certified minority business enterprises or minority persons as subcontractors or material suppliers for this project, should bidder be awarded a contract.

Bids are due at 2:00 p.m., local time, May 9, 2019, at the Clay County Utility Authority, 3176 Old Jennings Road, Middleburg, Florida 32068-3907, and will be opened as soon thereafter as possible in the presence of the Recording Secretary of the AUTHORITY and all other interested persons. The opened Bids will be read aloud, examined for conformance to the specifications, tabulated, and one copy preserved in the custody of the AUTHORITY'S Recording Secretary.

Bids will not be valid unless received in triplicate by the Bid deadline and in a sealed envelope marked "CLAY COUNTY UTILITY AUTHORITY, Sealed Bid No. 18/19-A7"

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract, to be opened 2:00 p.m., May 9, 2019”, so as to guard against opening prior to the time set therefore.

Envelopes should be mailed or delivered in person to the above address. Questions should be directed in writing by email to jgray@clayutility.org no later than Monday, April 29, 2019 at 2:00 p.m. (local time).

BID Documents, drawings and any ADDENDA may be obtained electronically from www.clayutility.org/projects/procurement.aspx. All bidders shall be responsible for obtaining all documents and Addenda issued prior to the Bid.

The authority shall not be responsible for full or partial sets of documents including Addenda, if any, obtained from sources other than the issuing office.

Bids require a Bid security made payable to Owner for Part A: in an amount of five (5) percent of \$50,000 (\$2,500); for Parts B and C: five (5) percent of \$500,000 (\$25,000) in the form of a either a certified check or a bank money order or a Bid bond and may not be withdrawn after the scheduled opening time for a period of sixty (60) days.

The AUTHORITY reserves the right to waive formalities in any Bid, to reject any or all bids with or without cause, and/or to accept the Bid or any portion thereof that, in its judgement, will be in the best interest of the AUTHORITY.

END OF SECTION

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACTS

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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 and where the bidding procedures are to be administered.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office. The deposit will be refunded to each document holder of record who returns a complete set of Bidding Documents in good condition within 60 days after opening of Bids.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; Owner does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner, in making copies of Bidding Documents available on the above terms, does 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 To demonstrate Bidder's responsiveness, Bidder will submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below and in Article 15.
- A. Bidder's Ability to Perform and Responsiveness: Bidder before the award of any Contract, will demonstrate to the complete satisfaction of the Owner that the Bidder has the necessary facilities, ability and financial resources to perform the work or provide the requested special services in a satisfactory manner within the time specified; that Bidder has had experience in the work or special services of the same or similar nature; and that the Bidder's past history and references which will serve to satisfy the Owner beyond any doubt as to their responsiveness for doing the work.
- B. List of References and installations of similar work with contact names and telephone numbers as described in Article 15.
- C. Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

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

- A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;
- B. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
- C. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in the Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data";
- D. consider the information known to Bidder; 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, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;
- E. agree at the time of submitting its Bid that 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(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- F. 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;
- G. promptly give Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Owner is acceptable to Bidder; and
- H. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.02 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any

specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Owner written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Owner are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held.

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site will be identified by Purchase Order. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Owner in writing. Interpretations or clarifications considered necessary by Owner in response to such questions will be issued by Addenda and will be made available on CCUA's website to review; www.clayutility.org/projects/procurement.aspx. Questions received less than ten 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. Respondents shall be responsible for checking CCUA's website for any Addenda prior to bid submittal.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner for Part A: in an amount of five (5) percent of \$50,000 (\$2,500); for Parts B and C: five (5) percent of \$500,000 (\$25,000) and in the form of either a certified check, bank money order, or Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until 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 returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 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. The Bid security of other Bidders whom 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 Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

- 8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment will be set forth in the individual purchase orders issued under this Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if acceptable to Owner, application for such acceptance will not be considered by Owner until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. 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, individual, or entity if requested by Owner. If Owner, 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 a substitute, without an increase in the Bid.
- 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, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 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.

ARTICLE 13 – PREPARATION OF BID

- 13.01 *The Bid Form is included with the Bidding Documents. Bidding Documents are available on CCUA's website; www.clayutility.org/projects/procurement.aspx.* The authority shall not be responsible for full or partial sets of documents including Addenda, if any, obtained from sources other than the issuing office.
- 13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Part, bid item, and unit price item listed therein. In the case of optional alternatives, the words "No Bid," "No Change," or "Not Applicable" may be entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.
- 13.04 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 official address of the partnership shall be shown.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.06 A Bid by an individual shall show the Bidder's name and official address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.08 All names shall be printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.11 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 Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price for each item of Work listed in the Bid schedule.
- B. The total of all estimated prices will be in the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.
- C. Estimated Quantities: The Bidder's attention is called to the fact that any estimate of quantities furnished on the bid form or elsewhere, are approximate only. Estimated quantities are for proposal preparation only and should not be interpreted as restrictive minimum or maximum quantities to which contract prices apply. The owner does not assume any responsibility that the final quantities shall remain in strict accordance with the estimated quantities nor shall the successful contractor plead misunderstanding or deception because of such estimate of quantities. All contract work is contingent upon funding approved by the Clay County Utility Authority's Board of Supervisors.
- D. 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. Discrepancies between words and figures will be resolved in favor of the words.

14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in Paragraph 11.02 of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

15.01 *BID Documents, drawings, and ADDENDA, if any, may be obtained electronically from; www.clayutility.org/projects/procurement.aspx. All Bidders shall be responsible for obtaining Addenda, if any, issued prior to the bid. The authority shall not be responsible for full or partial sets of documents including Addenda, if any, obtained from sources other than the issuing office. See Bid Submittal Checklist for other documents needed for bid submittal.*

15.02 An unbound copy of the Bid Form is to be completed and submitted with the following documents:

- 1) The required Bid Security,
- 2) W-9 Tax Payers Identification form,
- 3) Public Entities Crimes Statement,
- 4) Trench Safety Affidavit,
- 5) Copy of Contractor's License or Underground Utility Contractor's License,

- 6) Authorization to do business in the State of Florida or Bidder's covenant in writing to obtain such authority prior to award of the contract (per Article 13),
- 7) Bidder Qualifications and Information:
 - a) Proof that the Bidder has been in business, under the same name, for a minimum of five (5) years
 - b) Location of offices
 - c) Copies of all contractor/subcontractor personnel's confined space entry and manufacturer installation certifications
 - d) Resumes of proposed project manager and project superintendent with verification that they each have a minimum of five (5) years of experience and have been employed with the Bidder's company for a minimum of one (1) year.
 - e) Equipment listing,
- 8) Subcontractor Qualifications and Information:
 - a) Name and address
 - b) Type of work to be performed
 - c) Proof that the Subcontractor has been in business, under the same name, for a minimum of three (3) years
 - d) Resumes of proposed project manager and project superintendent with verification that they each have a minimum of three (3) years of experience and have been employed with the Bidder's company for a minimum of one (1) year.
- 9) Bidder Reference Projects Information. Submit the following information for each of three (3) projects:
 - a) Project name
 - b) Project location (city, state)
 - c) Brief description of project substantiating similarity to this project
 - d) Date of completion of project
 - e) Owner's name
 - f) Owner's Project Manager name, telephone number and email address
 - g) Engineer's Project Manager name, telephone number and email address.
- 10) Subcontractor Reference Projects Information. Submit the following information for each of three (3) projects:
 - a) Project name
 - b) Project location (city, state)
 - c) Brief description of project substantiating similarity to this project
 - d) Date of completion of project
 - e) Owner's name
 - f) Owner's Project Manager name, telephone number and email address

- g) Engineer's Project Manager name, telephone number and email address.
- 11) Product Specifications - Detailed, manufacturer product specifications of the rehabilitation system to be used for work under this contract:
- Part A – Treatment Plant Wetwell Lining System
 - Part B – Manhole/Lift Station Wetwell Coating System
 - Part C – CIPP Sanitary Sewer Lining System
- 12) Documentation of good faith efforts to utilize MBE/WBEs on this project,
- 13) Current workload (project commitments),
- 14) Financial Statement (THIS INFORMATION MUST BE SUBMITTED IN A SEPARATE ENVELOPE WITH "FINANCIAL INFORMATION" WRITTEN ON THE OUTSIDE. Per Florida Statutes this information is exempt from public information requests.) or a letter from the bidder's surety showing sufficient bonding capacity for this project. Most recent financial statements:
1. Audited financial statements [if Bidder has bank loan(s)] including:
 - a. "Cash on hand".
 - b. Calculation of "Current Ratio" (result of dividing current assets by current liabilities).
 - c. Calculation of "Debt to Asset Ratio" (result of dividing total liabilities by total assets).
 - d. Ratio of "working capital" to "total assets".
 - e. Ratio of "retained earnings" to "total assets".
 - f. Ratio of "earnings before interest and taxes" to "total assets".
 - g. Ratio of "net worth" to "total liabilities".
 2. Unaudited financial statements (if audited statements are not available).
 3. Last three (3) years of corporate federal income tax returns.
 4. In lieu of financial information described in Paragraph 14. 1.-3., Bidder may provide a letter from his bonding company stating that Bidder has sufficient available bonding capacity for the project.
- 15) Part C only: Bidder shall include copies of their company's safety logs (summaries only) submitted to the Occupational Health and Safety Administration (OSHA) and those of any subcontractors to perform work under this contract for the 2016, 2017, and 2018 calendar years. Proposal will be rejected if the OSHA logs (summaries only) are NOT provided with the proposal submittal. The Owner reserves the right to reject a proposal based upon past safety performance as evidenced from contractor/subcontractor OSHA logs (summaries only), references and other means as determined by the Owner. Safety performance shall be demonstrated by the contractor to the Owner's satisfaction.

- 16) Part C only: Product Performance - Bidder shall provide a reference list that documents the proposed product is commercially proven. For a product to be considered “commercially proven”, a minimum of 2,000,000 linear feet of successful sanitary sewer system installations in the United States within 5 years must be documented to the satisfaction of the Owner. In addition, at least 300,000 linear feet of 8” to 18” of the product shall have been in successful service within sanitary sewer systems within the State of Florida for a minimum of five (5) years.
- 17) Part C only: CIPP Lining Installer Performance - Bidder shall provide documentation demonstrating that an installer is “commercially proven”. For an installer to be “commercially proven”, the installer must satisfy all insurance, financial and bonding requirements of the Owner and must have had at least five (5) years active experience under the firm’s current name in the commercial installation of the proposed product. In addition, the installer must have successfully installed a minimum of 1,000,000 linear feet within 24 months of the proposed product in sanitary systems in the State of Florida.
- 18) Part C only: Cleaning Contractor Performance – Bidder shall provide documentation demonstrating that Cleaning Contractor has previously been engaged in cleaning operations of similar size and complexity to the work described herein. A contractor conducting cleaning operations on existing sewer lines shall have five (5) years experience in cleaning existing sewer lines using the equipment specified herein and shall have successfully completed projects containing a total of at least 200,000 linear feet within the past two (2) years.
- 19) Part C only: Lateral Installer Performance - The contractor or subcontractor shall have a minimum of two (2) years of service continuous experience installing CIPP Lateral Lining in pipe of similar size, length and configuration as proposed in this project. In addition, the contractor or subcontractor shall have successfully installed 15,000 CIPP laterals in a wastewater collection system application. The onsite Superintendent must have installed over 5,000 CIPP laterals of like condition for this geographic area and have a minimum of 5 years of CIPP industry experience.

15.02 The Authority reserves the right to examine documentation which supports compliance with federal, state, and local labor regulations. Examples include Federal tax form 941 and OSHA incident report forms.

15.03 A Bid shall be submitted 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 Chief Engineer, Clay County Utility Authority, 3176 Old Jennings Road, Middleburg, Florida 32068.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or 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.
- 16.02 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 Request for 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, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, incomplete, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 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.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.
- 19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.
- 19.07 The Owner will evaluate the bids and the award will be made to the lowest responsive, responsible bidder for the Part(s) selected by the Owner.
- 19.08 Certified minority business enterprises or minority persons are encouraged to timely submit their bid for this project consistent with the terms of this Notice. Due consideration also will be given to bidders, other than certified minority business enterprises or minority persons, who agree to use certified minority business enterprises or minority persons as subcontractors or material suppliers for this project, should they be awarded this bid.
- 19.09 In evaluating Bids, Buyer will consider the qualifications of the Bidders. The AUTHORITY shall evaluate each proposal based on the following factors:
- A. Cost - Cost is always an important factor, however it is not the only consideration.
 - B. Emergency Service - Contractor must respond to an emergency situation within 24 hours and be mobilized and ready to make repairs as required and in accordance with these specifications.
 - C. Experience of the Firm - Years of experience providing these types of services along with customer references and past performance are important factors that will be considered. In the past 24 months, Contractor shall have successfully completed:
 - Part A – 20 treatment plant wetwell lining systems
 - Part B – 200 manhole/lift station wetwell lining systems
 - Part C – 1,000,000 linear feet of sanitary pipe lining.
 - D. Logistics - The location of the firm in relation to the service area and the logistical effort required to transport equipment are factors that will be taken into consideration.
 - E. Prior experience - The AUTHORITY reserves the right to reject a bid based on past performance of the firm.
 - F. Equipment Availability - Contractor must own or have a long-term lease for all equipment and be capable of performing all of the work listed in the bid form with this equipment.
 - G. Safety: The Authority reserves the right to reject a bid based on unsatisfactory safety record or a lack of documented safety procedures.

- H. License Required - Contractor must have valid a Florida Underground Utility Contractor's License or General Contractor's License.
- I. Compliance of proposed products with the contract specifications.
- J. For Part C – Sewer Rehabilitation using Cured-in-place Pipe, the following additional evaluation criteria and point system shall be used to evaluate the Bidder's proposal:

The Owner's staff shall conduct an evaluation of all Part C Bidders on the basis of the information provided with the proposal and other evaluation criteria as set forth above. Recommendation for award will be made to the highest rated Bidder as determined by the Owner's staff in accordance with the award criteria. Selection will be made from a short list of Bidders deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation criteria listed below:

<u>Criteria</u>	<u>Score</u>	<u>WeightMax.</u>	<u>Pts. Possible</u>
References to verify product performance in conditions similar to the work to be performed for the Owner.	25	10	250
References to verify installer performance for work similar to that of the work to be performed for the Owner	25	10	250
Documentation and references to verify the contractor's Safety practices and safety history including any subcontractor in the performance of work similar to work to be performed for the Owner.	25	20	500
Price	15	10	150
<u>Office and staff location</u>	<u>10</u>	<u>5</u>	<u>50</u>
TOTAL	100		1,200

19.09 The Bidders shall provide unit prices for all bid items. The Owner will evaluate the bids and determine which bid is in its best interest and the award will be made to the highest ranking based on the items of consideration in section 19.08 above.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

- 20.01 Article 5 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 executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – SALES AND USE TAXES

- 22.01 State sales and use taxes on materials and equipment to be incorporated in the Work shall be included in the Bid. However, the Owner is exempt from sales and use taxes on materials and equipment and therefore, at the Owners option, the Contractor shall be required to provide the Owner with the details of his Purchase Order(s), including vendor name, address, and quantity and type of materials and/or equipment being ordered. The Owner may choose to order the major materials and/or equipment direct. Should the Owner choose to do this, any payment that is made direct by the Owner (plus an amount equal to the sales tax that would have been paid by the Contractor) for the materials shall be a direct deduct from the Contractors contract as if the payment were made direct to the Contractor. The whole purpose of this provision is to save the amount of sales taxes that would be otherwise assessed to the Contractor for the major material purchases.

ARTICLE 23 – RETAINAGE

- 23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

END OF SECTION

SECTION 00300

BID FORM

CCUA BID NO. 18/19-A7

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract
CLAY COUNTY UTILITY AUTHORITY

SUBMITTED BY: _____ DATE: _____

The undersigned, as Bidder, hereby declares that the only person or persons interested in the proposal as Principals is, or are named herein and that no other person that is herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company, or parties making a bid or proposal; and that it is in all respects fair and in good faith, without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the places where the work is to be performed; that he has examined the plans and specifications for the work and contract documents relative thereto, that he has read all special provisions furnished prior to the opening of bids, and that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this proposal is accepted, to contract with the Owner in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the contract in full and complete it in accordance with the shown, noted, described and reasonable intended requirements of the plans and specifications and contract documents to the full satisfaction of the contract with the Owner with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and contract documents, as follows:

BID SCHEDULE

Bids are to be on a unit price basis and are to include all labor, materials, equipment and incidentals necessary to perform the special services as indicated in the contract documents. Bidders may bid on any or all Parts but must provide unit pricing for each item in any Part they intend to bid. Incomplete bid submittals will not be accepted. Work includes, but is not necessarily limited to, the following:

This is a five (5) year continuing contract for work that consists of furnishing all labor, materials and equipment necessary to rehabilitate sanitary sewers, manholes and/or wetwells. Owner shall furnish construction plans to identify the work for which purchase orders will be issued.

Part A – Treatment Plant Wetwell Rehabilitation

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
A.	Surface Preparation	4,000	SF		
B.	Material Installation	4,000	SF		
Sub-total Part A					
C.	Construction Performance & payment Bond Not to Exceed 2%		%		
Total Part A					

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Part B – Manhole or Lift Station Wetwell Rehabilitation

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
A.	Clean and Coat New Sanitary Sewer Manhole (4-foot diameter)	50	VF		
B.	Clean and Coat New Sanitary Manhole (5-foot diameter)	50	VF		
C.	Clean and Coat Existing Sanitary Sewer Manhole (4-foot diameter)	1000	VF		
D.	Clean and Coat Existing Sanitary Sewer Manhole (5-foot diameter)	1000	VF		
E.	Clean and Coat Existing Wetwell	5000	SF		
F.	Interior Manhole Coating/Lining Repair	50	SF		
G.	Adjust manhole frame and cover (adjustment rings not-to-exceed 12")	25	EA		
H.	Adjust manhole frame and cover with cone or riser section (Each additional foot over initial 12")	5	VF		
I.	Install frame & cover (24")	1	EA		
J.	Install frame & cover (36")	1	EA		
K.	Invert Replacement	50	EA		
L.	Inside Drop System 4" - 8"	25	EA		
M.	Inside Drop System 10" - 12"	25	EA		
N.	Stop Leak (per manhole without lining)	50	EA		
O.	Maintenance of Traffic				
1.	Traffic Control – MOT Index 601 or 602 (per day)	2	LS		
2.	Traffic Control – MOT Index 603 or higher (per day)	4	LS		
3.	Traffic Control – MOT Index 601 or 602 (per week)	2	LS		
4.	Traffic Control – MOT Index 603 or higher (per week)	4	LS		
P.	Emergency Response Mobilization (per Work Order)	5	EA		
Q.	Construction Video and Photos (per Work Order)	20	EA		
Sub-total Part B					\$
R.	Construction Performance & Payment Bond Not to Exceed 2%		%		
Total Part B					\$

00300-3

Part C – Sanitary Sewer Rehabilitation – Cured-in-place Pipe (CIPP)

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
A. Sanitary Sewer Line Cleaning and Inspection					
1.	Light Cleaning (<1/4 diameter)				
a.	4" Diameter	5,000	LF		
b.	6" Diameter	2,000	LF		
c.	8" Diameter	13,250	LF		
d.	10" Diameter	1,250	LF		
e.	12" Diameter	900	LF		
f.	14" Diameter	500	LF		
g.	18" Diameter	100	LF		
h.	20" Diameter	100	LF		
i.	24" Diameter	100	LF		
2.	Tuberculation Cleaning				
a.	4" Diameter	250	LF		
b.	6" Diameter	100	LF		
c.	8" Diameter	650	LF		
d.	10" Diameter	75	LF		
e.	12" Diameter	50	LF		
f.	14" Diameter	25	LF		
g.	18" Diameter	50	LF		
h.	20" Diameter	50	LF		
i.	24" Diameter	50	LF		
3.	Root Removal				
a.	4" Diameter	500	LF		
b.	6" Diameter	200	LF		
c.	8" Diameter	1,300	LF		
d.	10" Diameter	125	LF		
e.	12" Diameter	90	LF		
f.	14" Diameter	50	LF		
g.	18" Diameter	50	LF		
h.	20" Diameter	50	LF		
i.	24" Diameter	50	LF		
4.	CCTV Pipe Inspection				
a.	6" Diameter	2,000	LF		
b.	8" Diameter	13,250	LF		
c.	10" Diameter	1,250	LF		
d.	12" Diameter	900	LF		
e.	14" Diameter	500	LF		

00300-4

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
f.	18" Diameter	200	LF		
g.	20" Diameter	200	LF		
h.	24" Diameter	200	LF		
5.	Clean & CCTV Inspection – Sewer Lateral (no lining)				
a.	Lateral inspection 0' to 40'	20	EA		
b.	Additional Lateral Inspection > 40'	1	LV		
B. Sanitary Sewer Rehabilitation					
1. CIPP lining					
a.	6" Diameter				
1	4.5 mm nominal thickness (.177)	2,000	LF		
b.	8" Diameter				
1	6.0 mm nominal thickness (.236)	13,250	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
c.	10" Diameter				
1	6.0 mm nominal thickness (.236)	1,250	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
d.	12" Diameter				
1	6.0 mm nominal thickness (.236)	900	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
e.	14" Diameter				
1	6.0 mm nominal thickness (.236)	500	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
e.	18" Diameter				
1	6.0 mm nominal thickness (.236)	200	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
4	10.5 mm nominal thickness (.413)	1	LF		
f.	20" Diameter				
1	6.0 mm nominal thickness (.236)	200	LF		
2	7.5 mm nominal thickness (.295)	1	LF		
3	9.0 mm nominal thickness (.354)	1	LF		
4	10.5 mm nominal thickness (.413)	1	LF		
5	12.0 mm nominal thickness (.472)	1	LF		
g.	24" Diameter				
1	9.0 mm nominal thickness (.354)	200	LF		

00300-5

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
2	12.0 mm nominal thickness (.472)	1	LF		
3	12.0 mm nominal thickness (.472)	1	LF		
4	13.5 mm nominal thickness (.531)	1	LF		
5	15.0 mm nominal thickness (.591)	1	LF		
2. Sectional CIPP lining					
a.	6" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
b.	8" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
c.	10" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
d.	12" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
e.	14" diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
c.	18" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
d.	20" Diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		

00300-6

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
4	8' in length	1	EA		
e.	24" diameter				
1	3' in length	1	EA		
2	4' in length	1	EA		
3	6' in length	1	EA		
4	8' in length	1	EA		
3. Lateral CIPP Lining					
a.	Top hat – up to 36 inches				
1	4" lateral connection	60	EA		
2	6" lateral connection	120	EA		
3	8" lateral connection	1	EA		
b.	Full wrap – up to 36 inches				
1	4" lateral connection	60	EA		
2	6" lateral connection	120	EA		
3	8" lateral connection	1	EA		
c.	Lateral lining 0 to 40'	175	EA		
d.	Additional lateral lining >40'	1	LF		
e.	Lateral cutout & polish	175	EA		
f.	Lateral grout	1	EA		
4. Cleanout Installation					
a.	4" cleanout	10	EA		
b.	6" cleanout	10	EA		
c.	8" cleanout	1	EA		
5. Site Restoration					
a.	Concrete	200	SF		
b.	Paver removal and replacement	100	SF		
c.	Sodding	200	SF		
d.	Seeding and Mulching	400	SF		
6.	Dewatering	500	LF		
7.	Erosion and Sediment Control	500	LF		
8.	Tanker Trucks for Bypass (daily rate for 8 hours)	10	EA		
C. Maintenance of Traffic					
a.	Traffic Control – MOT Index 601 or 602 (per day)	2	LS		
b.	Traffic Control – MOT Index 603 or higher (per day)	4	LS		
c.	Traffic Control – MOT Index 601 or 602 (per week)	2	LS		
d.	Traffic Control – MOT Index 603 or higher (per week)	4	LS		
D. Administration					
a.	Emergency Response Mobilization (/Work Order)	5	EA		

00300-7

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
b.	Construction Video and Photographs (per Work Order)	20	EA		
Sub-total Part C					\$
D. Bond					
a.	Contract Performance and Payment Bond Cost Not to Exceed 2%				
Total Part C					\$

Performance and Payment Bonds shall not exceed 2 percent of an individual project amount. See Section 01025 Measurement and Payment for further information on unit price bid items.

All Work performed under this Agreement must be covered by a 1-year, 100% Performance and Payment Bond with an additional 1-year, 100% warranty bond for the second year of the warranty period. Purchase orders will be issued for all Work. For planned projects, the bond shall be delivered along with the signed copy of the purchase order for the amount of the purchase order. For emergency work, the Authority will expect the Contractor to maintain at all times, a \$100,000 Performance and Payment Bond that is renewable on an annual basis. The additional 1-year warranty bond is required for all emergency work.

The Authority will pay the premium of the annual bond to cover emergency work up to 2.5 percent of the Bond amount based on actual invoices from the Surety. The bond costs for planned work will be based on the bid price provided in the bid form

The Bidder shall provide unit prices for all items. The Owner will evaluate the bids and other required submittals and supplemental information noted in Article 15.01 of Section 00200 and evaluation criteria items A through J shown in Article 19.08 of Section 00200. The recommendation of Award will be based on a ranking of the factors listed in the Instruction to Bidders in Section 00200 Paragraph 19.08. See Instructions for Bidders for discussion of Award of Contract.

The Bidder further proposes and agrees to commence work on a date to be specified in a written Purchase Order from the Owner and shall complete the work pursuant to a schedule identified in the said Purchase Order.

At the Owners option, the Contractor shall be required to provide the Owner with the details of his Purchase Order, including vendor name, address, and quantity and type of materials being ordered. The Owner may choose to order the major materials and/or equipment direct. Should the Owner choose to do this, any payment that is made direct by the Owner (plus an amount equal to the sales tax that would have been paid by the Contractor) for the materials shall be a direct deduct from the Contractors contract as if the payment were made direct to the Contractor. The whole purpose of this provision is to save the amount of sales taxes that would be otherwise assessed to the Contractor for the major material purchases.

It shall be the Contractors responsibility to submit Shop Drawings, receive and verify accuracy of such shipments and, upload such shipments as if Contractor had purchased the materials direct. Shop Drawings received from the suppliers, will be forwarded by the Clay County Utility Authority to the Contractor for their review of accuracy and correctness of the Shop Drawings and shall provide an approval action on each product. Shop Drawings shall then be submitted to the Design Engineer for their review and approval action. After the Contractor and Engineer have reviewed the Shop Drawings, they then shall be submitted to the Clay County Utility Authority for review.

The Owner shall assume all risk of loss and bear the cost of insurance on all materials purchased tax exempt. Once the Clay County Utility Authority's Purchase Order is prepared, then it will be returned to the Contractor for proofing and mailing to the vendor.

The Bidder further proposes and agrees to commence work under his contract on a date to be specified in the Notice-to-Proceed and shall complete all work there under within the time schedule in the Agreement.

Addendum Receipt: Bidders shall acknowledge below the receipt of all addenda, if any, to plans and specifications.

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

Bidders shall attach the following supplemental information to their bid. **Items shall be clearly labeled and numbered and submitted in the order listed below:**

- 1) The required Bid Security.
- 2) W-9 Tax Payers Identification form
- 3) Public Entities Crimes Statement
- 4) Trench Safety Affidavit
- 5) Copy of Contractor's License or Underground Utility Contractor's License
- 6) Authorization to do business in the State of Florida or Bidder's covenant in writing to obtain such authority to award of the contract (per Article 13)
- 7) Bidder Qualifications and Information:
 - a. Proof that the Bidder has been in business, under the same name, for a minimum of five (5) years
 - b. Location of offices
 - c. Copies of all contractor/subcontractor personnel's confined space entry and manufacturer installation certifications
 - d. Resumes of proposed project manager and project superintendent with verification that they each have a minimum of five (5) years of experience and have been employed with the Bidder's company for a minimum of one (1) year.
 - e. Equipment listing,

- 8) Subcontractor Qualifications and Information:
- a. Name and address
 - b. Type of work to be performed
 - c. Proof that the Subcontractor has been in business, under the same name, for a minimum of three (3) years
 - d. Resumes of proposed project manager and project superintendent with verification that they each have a minimum of three (3) years of experience and have been employed with the Bidder's company for a minimum of one (1) year.
- 9) Bidder Reference Projects Information. Submit the following information for each of three (3) projects:
- a. Project name
 - b. Project location (city, state)
 - c. Brief description of project substantiating similarity to this project
 - d. Date of completion of project
 - e. Owner's name
 - f. Owner's Project Manager name, telephone number and email address
 - g. Engineer's Project Manager name, telephone number and email address.
- 10) Subcontractor Reference Projects Information. Submit the following information for each of three (3) projects:
- a. Project name
 - b. Project location (city, state)
 - c. Brief description of project substantiating similarity to this project
 - d. Date of completion of project
 - e. Owner's name
 - f. Owner's Project Manager name, telephone number and email address
 - g. Engineer's Project Manager name, telephone number and email address.
- 11) Product Specifications - Detailed, manufacturer product specifications of the rehabilitation system to be used for work under this contract:
- Part A – Treatment Plant Wetwell Lining System
 - Part B – Manhole/Lift Station Wetwell Coating System
 - Part C – CIPP Sanitary Sewer Lining System
- 12) Documentation of good faith efforts to utilize MBE/WBEs on this project,
- 13) Current workload (project commitments),

- 14) Financial Statement (THIS INFORMATION MUST BE SUBMITTED IN A SEPARATE ENVELOPE WITH “FINANCIAL INFORMATION” WRITTEN ON THE OUTSIDE. Per Florida Statutes this information is exempt from public information requests.) or a letter from the bidder’s surety showing sufficient bonding capacity for this project. (See Section 00200 Instructions to Bidders, Article 15, Paragraph 15.02 for details.)
- 15) Part C only: OSHA Logs - Bidder shall include copies of their company’s safety logs (summaries only) submitted to the Occupational Health and Safety Administration (OSHA) and those of any subcontractors to perform work under this contract for the 2016, 2017, and 2018 calendar years. Proposal will be rejected if the OSHA logs (summaries only) are NOT provided with the proposal submittal. The Owner reserves the right to reject a proposal based upon past safety performance as evidenced from contractor/subcontractor OSHA logs (summaries only), references and other means as determined by the Owner. Safety performance shall be demonstrated by the contractor to the Owner’s satisfaction.
- 16) Part C only: Product Performance - Bidder shall provide a reference list that documents the proposed product is commercially proven. For a product to be considered “commercially proven”, a minimum of 2,000,000 linear feet of successful sanitary sewer system installations in the United States within 5 years must be documented to the satisfaction of the Owner. In addition, at least 300,000 linear feet of 8” to 18” of the product shall have been in successful service within sanitary sewer systems within the State of Florida for a minimum of five (5) years.
- 17) Part C only: CIPP Lining Installer Performance - Bidder shall provide documentation demonstrating that an installer is “commercially proven”. For an installer to be “commercially proven”, the installer must satisfy all insurance, financial and bonding requirements of the Owner and must have had at least five (5) years active experience under the firm’s current name in the commercial installation of the proposed product. In addition, the installer must have successfully installed a minimum of 1,000,000 linear feet within 24 months of the proposed product in sanitary systems in the State of Florida.
- 18) Part C only: Cleaning Contractor Performance – Bidder shall provide documentation demonstrating that Cleaning Contractor has previously been engaged in cleaning operations of similar size and complexity to the work described herein. A contractor conducting cleaning operations on existing sewer lines shall have five (5) years experience in cleaning existing sewer lines using the equipment specified herein and shall have successfully completed projects containing a total of at least 200,000 linear feet within the past two (2) years.
- 19) Part C only: CIPP Lining Lateral Installer Performance - The contractor or subcontractor shall have a minimum of two (2) years of service continuous experience installing CIPP Lateral Lining in pipe of similar size, length and configuration as proposed in this project. In addition, the contractor or subcontractor shall have successfully installed 15,000 CIPP laterals in a wastewater collection system application. The onsite Superintendent must have installed over 5,000 CIPP laterals of like condition for this geographic area and have a minimum of 5 years of CIPP industry experience.

AN INDIVIDUAL

By _____ (Seal)

(Signature)

(Print Name)

doing business as
Business Address: _____

Phone No: _____ Fax No: _____

A PARTNERSHIP

(Firm Name) (Seal)

(General Partner/Signature)

(Print Name)

Business Address: _____

Phone No: _____ Fax No: _____

A CORPORATION

(Corporation Name) (Seal)

(State of Incorporation)

By _____
(Signature of Person Authorized to Sign)

(Print Name)

(Title) (Corporate Seal)

00300-12

Attest _____
(Secretary)

Business Address: _____

Phone No: _____ Fax No: _____

A JOINT VENTURE

(Business Name)

By: _____
(Signature)

(Print Name)

(Address)

By: _____
(Signature)

(Print Name)

(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

The full names; business addresses; business and emergency telephone numbers of persons and firms interested in the foregoing bid, as principals, are as follows:

(If Corporation, President, Secretary, and Treasurer Identification)

MANDATORY SUBMITTAL CHECKLIST
(Submit this checklist with bid.)

- ☐ 1. The required Bid Security
- ☐ 2. W-9 Tax Payers Identification form
- ☐ 3. Public Entities Crimes Statement
- ☐ 4. Trench Safety Affidavit
- ☐ 5. Copy of Contractor's License or Underground Utility Contractor's License
- ☐ 6. Authorization to do business in the State of Florida or Bidder's covenant in writing to obtain such authority prior to award of the contract (per Article 13)
- ☐ 7. Bidder Qualifications and Information
- ☐ 8. Subcontractor Qualification and Information
- ☐ 9. Bidder Reference Projects Information: Submit the information on the form below for each of the three (3) projects substantiating similarity to this project.
- ☐ 10. Subcontractor Reference Projects Information: Submit the information on the form below for each of the three (3) projects substantiating similarity to this project.
- ☐ 11. Product Specifications
- ☐ 12. Documentation of good faith efforts to utilize MBE/WBEs on this project.
- ☐ 13. Current workload (project) commitments
- ☐ 14. Financial Statement (THIS INFORMATION MUST BE SUBMITTED IN A SEPARATE ENVELOPE WITH "FINANCIAL INFORMATION" WRITTEN ON THE OUTSIDE. Per Florida Statutes this information is exempt from public information requests.) or a letter from the bidder's surety showing sufficient bonding capacity for this project.
- ☐ 15. Part C only: OSHA Logs
- ☐ 16. Part C only: Project Performance
- ☐ 17. Part C only: CIPP Lining Installer Performance
- ☐ 18. Part C only: Cleaning Contractor Performance
- ☐ 19. Part C only: CIPP Lining Lateral Installer Performance

Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

We (_____) certify
that we submitted the required documents as checked above.

Bidder's Signature

Date

00300-14

CONTRACTOR/SUB-CONTRACTOR PROJECT REFERENCES

Please provide as references, the project description and client reference information of at least three (3) clients you have served in the last two (2) years.

a. Project Name: _____

b. Project Location (city, state): _____

c. Brief description of project substantiating similarity to this project: _____

d. Date of completion of project: _____

e. Owner's Name: _____

f. Owner's Project Manager Name: _____

Phone: _____ Cell: _____

Email: _____

g. Engineer's Project Manager Name: _____

Phone: _____ Cell: _____

Email: _____

SECTION 00400

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, _____
_____ as Principal, and _____
_____ as Surety, are hereby held and firmly
bound unto Clay County Utility Authority as OWNER in the penal sum of _____
_____ for payment of which, well and truly
to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20__

The Condition of the above obligation is such that whereas the Principal has submitted to Clay County Utility Authority a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing for the Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract, Clay County Utility Authority Bid No. 18/19-A7.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety of all and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

BY: _____

Principal

Surety

Attorney-in-Fact

**SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (A),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

**THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A
NOTARY PUBLIC OR OTHER OFFICIAL, AUTHORIZED TO ADMINISTER OATHS.**

1. This sworn statement is submitted to _____
(print name of public entity)
By _____
(print individual's name and title)
whose business address is _____
And (if applicable) its Federal Employer Identification Number (FEIN) is _____
(If the entity has no FEIN, include Social Security Number of the individual signing this
sworn statement:
2. I understand that a "public entity crime" as defined in Paragraph 287.133 (1) (G), Florida
Statutes means a violation of any state or federal law by a person with respect to and
directly related to the transaction of business with any public entity or with an agency or
political subdivision of any other state or of the United States, including, but not limited
to, any bid or contract for goods or services to be provided to any public entity or an
agency or political subdivision of any other state or of the United States and involving
antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material
misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133 (1) (B),
Florida Statutes means finding of guilt or a conviction of public entity crime, with or
without an adjudication of guilt, in any federal or state trial court of record relating to
charges brought by indictment, or information after July 1, 1989, as a result of jury
verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133 (1) (A), Florida Statutes,
means:
 1. A predecessor or successor of a person convicted of a public entity crime; or
 2. An entity under the control of any natural person who is active in the management of
the entity and who has been convicted of a public entity crime. The term "affiliate"
includes those officers, directors, executives, partners, shareholders, employees,
members, and agents who are active in the management of an affiliate. The ownership
by one person of shares constituting a controlling interest in another person, or a pooling
of equipment or income among persons when not for fair market value under an arm's
length agreement, shall be prima facie case that one person controls another person. A
person who knowingly enters into a joint venture with a person who has been convicted
of a public entity crime in Florida during the preceding 36 months shall be considered an
affiliate.
5. I understand that a "person" as defined in Paragraph 287.133 (1) (E), Florida Statutes,
means any natural person or entity organized under the laws of any state or of the United
States with the legal power to enter into a binding contract and which aids or applies to
bid on contracts for the provision of goods or services led by a public entity, or which
otherwise transacts or applies to transact business with a public entity. The term "person"

00420-1

includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

☐ Neither the entity submitting this sworn statement nor any of it's officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

☐ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

☐ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or and affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of final order.)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(signature)

(date)

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority _____
who after first being sworn by me, affixed his/her _____ (name of individual signing)
signature in the space provided above on this _____ day of _____, 20__.

My commission expires: _____

NOTARY PUBLIC

SECTION 00425

W-9 Form

(See next page for W-9 Form)

00425-1

Request for Taxpayer Identification Number and Certification

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the
requester. Do not
send to the IRS.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ► _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>
5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
6 City, state, and ZIP code	
7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number										
				-				-		
or										
Employer identification number										
				-						

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ►	Date ►
------------------	-----------------------------------	---------------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

SECTION 00430

TRENCH SAFETY AFFIDAVIT

Trench excavations on Projects authorized under this Contract are expected to be in excess of 5 feet deep. The Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 Subpart P trench safety standards will be in effect during the period of construction of the Project.

Bidder acknowledges that included in the Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of FL) effective October 1, 1990, and hereby gives assurance that, if awarded the Contract, the Contractor or Subcontractor performing trench excavation work on the Project will comply with the applicable trench safety standards. The Bidder further identifies the costs as follows:

Trench Safety Item (Description)	Unit Quantity	Units of Measure (LF,SY)	Unit Cost	Extended Cost
--	------------------	--------------------------------	--------------	------------------

BASE BID ITEMS:

A. _____	_____	_____	_____	_____
B. _____	_____	_____	_____	_____
C. _____	_____	_____	_____	_____

ALTERNATE NO. 1 ITEMS:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

TOTAL \$ _____

FAILURE TO COMPLETE THE ABOVE SHALL RESULT IN THE BID BEING DECLARED NON-RESPONSIVE.

COMPANY NAME: _____

DATE: _____

BY: _____

00430-1

SECTION 00500

STANDARD FORM OF AGREEMENT

BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between CLAY COUNTY UTILITY AUTHORITY
(owner)

and _____
(Contractor)

Owner and Contractor, in consideration of the mutual covenants set forth herein, 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:

- Continuing Contract for Sanitary Sewer, Wetwell and/or Manhole Rehabilitation

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract
Clay County Utility Authority Bid No. 18/19-A

ARTICLE 3 - ENGINEER

3.01 The Project (s) shall be managed by **Jim French, PE** (Engineer), who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 Time of the Essence

00500-1

- 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. These time limits shall be negotiated for each individual project with the Contractor and shall be binding upon execution of said purchase orders.
- B. The term of the agreement will be for a period of one (1) year with an option to extend the agreement for two (2) additional twenty-four (24) month periods upon mutual agreement of both parties. The contract may be extended beyond the 5-year period in twenty-four (24) month intervals upon mutual consent of both parties.
- C. Owner may terminate this agreement, with or without cause upon 60-day written notice to the contractor.

4.02 Substantial Completion and Final Payment

- A. The Work will be substantially completed within as provided in Paragraph 2.03 of the General Conditions and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions.

4.03 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. 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), Contractor shall pay Owner \$200 for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$100 for each day that expires after the time specified in Paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 - CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A and 5.01.B below:

- A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 5.01.A.:

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

- B. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

5.02 Fee Modification

With prior written approval from the Clay County Utility Authority, the Contractor shall have the ability to adjust the prices set forth in the bid/contract documents commensurate with the contractor's increased cost for materials and the change in the consumer price index. Pricing adjustments will be effective at the first date of the new contract year – no mid-term adjustments will be permitted by the Owner. Within thirty (30) days after Contractor gives notice to the Owner of a price adjustment, the Owner may request an audit for the purpose of verifying the price adjustment. In the case of a price adjustment, no adjustment will be allowed on work orders which have already been issued by the Owner to the Contractor.

In making any price adjustment proposal, the Contractor shall notify the Owner, in writing prior to the renewal of contract, the specific price adjustments requested using the following formula:

$(25\% \times \text{increase cost of materials}) + (75\% \times \text{CPI index}) = \text{Total increase on a prices on the price schedules.}$

For example, if the cost of resin increases 10% and the CPI index increases 2%, the total increase for all prices would be: $(25\% \times 10\%) + (75\% \times 2\%) = 4\%$ increase (rounded to the nearest \$0.01).

The specific consumer price index used shall be the following:

Population Coverage:	CPI-U (all urban consumers)
Area Coverage:	U.S. Owner Average
Series Title:	All items
Index Base Period:	1982-84 = 100
Reference Range:	12-month period ending 12/31 which is released in mid-January.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

- A. Contractor shall submit Applications for Payment in accordance with Article 14 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 one progress payment per month on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 1st or 3rd Wednesday of each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of 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 in the General Requirements:

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 Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:
 - a. Ninety percent (90%) of the Work completed including the cost of materials and equipment stored and secured on the Site, but not incorporated in the Work (with the balance being retainage). If the Work has been fifty percent (50%) completed as determined by Engineer, the retainage shall be reduced to five percent (5%) on all subsequent payment requests. After fifty percent (50%) completion, if the character and progress of the Work have been satisfactory to Owner and Engineer, Contractor may request payment of up to one-half of the retainage held by the Owner on the entire amount of the Work completed, including the cost of materials and equipment stored and secured on the Site, but not incorporated in the Work.
2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to ninety-five percent (95%) of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less one hundred percent (100%) of Engineer's estimate of the value of the Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 Project Closeout

- A. Owner shall develop a list of items required to render complete, satisfactory, and acceptable the Work purchased by Owner. The process for the development of the list, including responsibilities of Owner and Contractor in developing and reviewing the list and a reasonable time for developing the list, are as follows:

1. For construction projects having an estimated cost of less than \$10 million, within 30 calendar days after reaching substantial completion of the Work; or
 2. For construction projects having an estimated cost of \$10 million or more, within 30 calendar days, unless otherwise extended by contract not to exceed 60 calendar days, after reaching substantial completion of the Work.
- B. If this Agreement between Owner and Contractor relates to Work covering more than one building or structure, or involves a multi-phased Project, the list shall contain items required to render complete, satisfactory, and acceptable all of the Work for each building, structure, or phase of the Project within the time limitations provided in subsection 1, above.
- C. The failure to include any corrective work or pending items not yet completed on the list developed pursuant to subsection 1 or subsection 2, above, does not alter the responsibility of the Contractor to complete all of the Work.
- D. Upon completion of all items on the list, Contractor may submit a payment request for all remaining retainage withheld by Owner pursuant to Section 255.078, Florida Statutes (2007) or any successor statute thereto. If a good faith dispute exists as to whether one or more items identified on the list have been completed pursuant to this Agreement, Owner may continue to withhold an amount not to exceed one-hundred fifty percent (150%) of the total costs to complete such items.
- E. All items of the Work that require correction under this Agreement and that are identified after the preparation and delivery of the list remain the obligation of Contractor as defined by this Agreement.
- F. Warranty items may not affect the final payment of retainage as provided in this section or as provided in this Agreement between Contractor and its subcontractors and suppliers.
- G. Retainage may not be held by Owner or Contractor to secure payment of insurance premiums under a consolidated insurance program or series of insurance policies issued to Owner or Contractor for the Project or a group of projects, and the final payment of retainage as provided in the section may not be delayed pending a final audit by Owner's or Contractor's insurance provider.
- H. If Owner fails to comply with its responsibilities to develop the list required under subsection 1 or subsection 2, above, as defined in this Agreement, within the time limitations provided in subsection 1, above, Contractor may submit a payment request for all remaining retainage withheld by Owner pursuant to Section 255.078, Florida Statutes (2007) or any successor statute thereto. Owner need not pay or process any payment request for retainage if Contractor has, in whole or in part, failed to cooperate with Owner in the development of the list or if Contractor has failed to perform its contractual responsibilities, if any, with regard to the development of the list or if Section 255.078 (6), Florida Statutes (2007) or any successor statute thereto applies.

6.04 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 - INTEREST

- 7.01 All payments due for the Work as provided in Article 14 of the General Conditions and not made within the applicable time limits shall bear interest at the rate specified in Section 255.073 (4), Florida Statutes (2007) or any successor statute thereto.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site 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 federal, state, and local 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 contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions. See Appendix for Geotechnical Report.
 - E. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.

- F. Contractor does not consider that any 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 Documents.
- 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 correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. 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.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement.
 - 2. Performance bond.
 - 3. Payment bond.
 - 4. General Conditions.
 - 5. Supplementary Conditions.
 - 6. Specifications as listed in the Table of Contents of the Project Manual.
 - 7. Addenda.
 - 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.
 - b. Documentation submitted by Contractor prior to Notice of Award.

9. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Order(s).
 - d. Purchase Order(s) with accompanying performance and payment bonds.
 - e. Drawings.
- 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 Paragraph 3.04 of 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. No assignment by a party hereto of any rights under or interests in this Agreement will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are 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 partners, successors, assigns, and legal representatives to the other party hereto, its partners, 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 Other Provisions

- A. WAIVER: The failure of either party to exercise any of its rights is not a waiver of those rights. A party waives only those rights specified in writing and signed by the party waiving its rights. Oral modification or rescission of this Agreement by an employee or agent of either party, shall not release either party of its obligations under this Agreement, shall not be deemed a waiver of any rights of either party to insist upon strict performance hereof, or of either party's rights or remedies under this Agreement or by law, and shall not operate as a waiver of any of the provisions hereof.

This portion of the page left intentionally blank.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in duplicate. One counterpart each has been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or identified by Owner and Contractor or on their behalf.

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

OWNER:

CONTRACTOR:

CLAY COUNTY UTILITY AUTHORITY

By: _____
Tom Morris, Executive Director

By: _____

[CORPORATE SEAL]

Attest: _____

Attest: _____

Address for giving notices:

Address for giving notices:

3176 Old Jennings Road
Middleburg, Florida 32068

License No. _____
(Where applicable)
Agent for service of process:

(If CONTRACTOR is a corporation or a
Partnership, attach evidence of authority to
sign.)

Designated Representative:

Designated Representative:

Name: Jim French, P.E.
Title: Chief Engineer
Address: 3176 Old Jennings Road
Middleburg, Florida 32068
Phone: (904) 213-2408
Facsimile: (904) 213-2469

Name: _____
Title: _____
Address: _____
Phone: _____
Facsimile: _____

SECTION 00600

PUBLIC CONSTRUCTION PERFORMANCE AND PAYMENT BOND

BY THIS BOND, We _____, as principal and _____, a Corporation, as Surety, are bound to Clay County Utility Authority, an independent special district existing under Chapter 94-491, Laws of Florida, Special Acts of 1994, herein called Owner, in the sum of \$_____, for performance, and the separate and additional sum of \$_____, for payment, for the payment of each of which we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated _____, 20____, between Principal and Owner for construction of _____, the contract being made a part of this Bond by reference, at the times and in the manner prescribed in the contract; and
2. Promptly makes payment to all claimants, as defined in Section 255.05 (1), Florida Statutes, supplying Principal with labor, materials or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this Bond is void, otherwise it remains in full force.

This Bond is to be deemed a Statutory Bond under Section 255.05, Florida Statutes, the provisions of which are hereby incorporated by reference and made a part hereof.

All interested parties are specifically directed to the following provisions regarding time and notice limitations as set out in Section 255.05(2), Florida Statutes:

A claimant, except a laborer, who is not in privity with the Contractor and who has not received payment for his labor, materials, or supplies, shall within 45 days after beginning to furnish labor, materials, or supplies for the prosecution of work, furnish the Contractor with a notice that he intends to look to the Bond for protection. A claimant who is not in privity with the Contractor and who has not received payment for his labor, materials or supplies shall, within 90 days after performance of the labor or after complete delivery of the materials or supplies or, with respect to rental equipment,

00600-1

within 90 days after the date that the rental equipment was last on the job site available for use, deliver to the Contractor and to the Surety written notice of the performance of the labor or delivery of the materials or supplies and of the nonpayment. No action for labor, materials, or supplies may be instituted against the Contractor or the Surety unless both notices have been given. No action shall be instituted against the Contractor or the Surety on the Payment Bond or the payment provisions of a combined Payment and Performance Bond after one (1) year from the performance of the labor or completion of delivery of the materials or supplies.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this Bond.

Dated On: _____

Principal's Address:

Surety's Address:

Project Description and Location:

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract
Clay County Utility Authority
CCUA Bid. No. 18/19-A7

(Principal)

By: _____

(Surety)

By: _____

(Attorney-in-Fact)

END OF SECTION

00600-2

**CLAY COUNTY UTILITY AUTHORITY
APPLICATION AND CERTIFICATION FOR PAYMENT**

TO OWNER: CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FL 32068

APPLICATION NO.:
PERIOD TO:
BID NO.: 18/19-A7

Distribution to:
___ Owner
___ Owners Representative
___ Contractor

FROM CONTRACTOR: Contractor's Name & Address

CONTRACT FOR: Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract Bid No. 18/19-A7

CONTRACTORS APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.

1. ORIGINAL CONTRACT SUM	\$ _____
2. Net change by Change Orders	\$ _____
3. CONTRACT SUM TO DATE (LINE 1 + 2)	\$ _____
4. TOTAL COMPLETED & STORED TO DATE	\$ _____
5. RETAINAGE:	
a. _____% of Completed Work	\$ _____
b. _____% of Stored Material	\$ _____
Total Retainage (Line 5a + 5b)	\$ _____
6. TOTAL EARNED LESS RETAINAGE (Line 4 less Line 5 Total)	\$ _____
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)	\$ _____
8. CURRENT PAYMENT DUE	\$ _____
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	\$ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

Attach a Schedule of Values which includes a description of work completed along with any supporting documentation.

The undersigned Contractor certifies that to the best of the Contractors knowledge,

information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____
State of: _____ County of: _____

Subscribed and sworn to before me this _____ day of _____, 20__

Notary Public: _____

My Commission expires: _____

OWNER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Owner's Representative certifies to the Owner that to the best of their Knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from the amount applied for. Initial all figures on this Application and on the Continuation Sheet that are changed to conform to the amount certified.)

OWNER'S REPRESENTATIVE:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

00640-1

SECTION 00650

REQUEST FOR INFORMATION (RFI)

Project: Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

RFI No.: _____

Date: _____

Owner: CCUA

Bid No.: 18/19-A7

Project Manager: _____

Engineer: _____

Project No.: _____

Project Manager: _____

Contractor: _____

Project No.: _____

Project Manager: _____

To: _____

From: _____

Contract document reference(s): _____

Description of RFI: ☐ Information ☐ Clarification ☐ Interpretation

Request for the items [*Described Below*] / [*in the Attached*]:

Requested By: _____

Date: _____

Signature

To: _____

From: _____

Response to RFI: ☐ Information ☐ Clarification ☐ Interpretation

Response to your request [*Described Below*] / [*in the Attached*]:

Response By: _____

Date: _____

Signature

CC: _____

00650-1

SECTION 00660

CHANGE ORDER REQUEST FORM

Project: Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

Bid No.: 18/19-A7

Change Order No.: _____

Change in Contract Times

(Days)

(Days)

Original Contract time:	Substantial Completion:	Ready for Final Payment:
Increased from previous C.O.:	Substantial Completion:	Ready for Final Payment:
Decreased from previous C.O.:	Substantial Completion:	Ready for Final Payment:
Contract time prior to this C.O.:	Substantial Completion:	Ready for Final Payment:
Increase in time on this C.O.:	Substantial Completion:	Ready for Final Payment:
Decrease in time on this C.O.:	Substantial Completion:	Ready for Final Payment:
Contract time with all approved C.O.s:	Substantial Completion:	Ready for Final Payment:

Change in Contract Price

Original Contract Price: _____
Increased from previously approved C.O.: _____
Decreased from previously approved C.O.: _____
Increase in Contract price this C.O.: _____
Decrease in Contract price this C.O.: _____
Contract price with all approved C.O.s: _____

The undersigned Contractor certifies to the best of my knowledge and belief: (1) all items and amounts shown above are correct; (2) all Work performed and Reimbursable Expenses fully comply with the terms and conditions of the Contract Documents; (3) all previous progress payments received from Clay County Utility Authority (CCUA) , on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of Contractor incurred in connection with Work covered by prior Applications for Payment; (4) title to all materials and deliverables incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to the CCUA at the time of payment clear of all liens, claims, security interests and encumbrances; (5) payment is due and has not been previously requested for these amounts; (6) no markup has been applied to reimbursable expenses.

Contractor Name and Title

00660-1

SECTION 00660

CHANGE ORDER REQUEST FORM

Cost Break Down Form: (instructions: use a separate form for each individual work item)

Description	Unit	Quantity	Unit Cost	Extended Cost
Labor				\$
Materials				\$
Equipment				\$
Maintenance of Traffic				\$
Bonding				\$
General Conditions				\$
Overhead and Profit				\$
				\$
				\$
Total firm fixed cost not to exceed amount:				\$

Note: attached supporting documentation

RFI No. initiating the change: _____

Description: _____

Justification for the request: _____

State the firm fixed cost not to exceed amount in words:

Contractor Signature: _____

Date: _____

Printed Name: _____

Title: _____

00660-2

SECTION 00700

GENERAL CONDITIONS

1.01 GENERAL

- A. The GENERAL CONDITIONS for this contract are the Standard General Conditions of the Construction Contract. Document C-700, 2007 Edition, prepared by Engineers Joint Contract Documents Committee (EJCDC) and issued and published jointly by National Society of Professional Engineers (NSPE), ACEC, ASCE and CSI (EJCDC).
- B. All provisions of the GENERAL CONDITIONS of EJCDC Document C-700 not amended or supplemental herein, or in the SUPPLEMENTARY CONDITIONS, shall remain in full force and effect.

1.02 SUPPLEMENTARY CONDITIONS

- A. The provisions of the GENERAL CONDITIONS and the Modifications herein, may be further modified in the SUPPLEMENTARY CONDITIONS and in Division 1, GENERAL REQUIREMENTS.

END OF SECTION

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
 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. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which liquid at standard conditions of temperature and pressure is (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *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.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *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 at the Site.
44. *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.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *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 Subcontractor.
48. *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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F 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 Paragraph 9.09 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 14.04 or 14.05).

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. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- 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. 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 Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *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 Agreement 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 Agreement. 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 Agreement, whichever date is earlier.

2.04 *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 the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;
 - 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *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 2.05.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 component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, 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 Contract Documents. 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 Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
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 Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier 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
2. 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.

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.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- 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 the Work is to be performed 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.

4.02 *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 contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed 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 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; 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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and
 - 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 Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous 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 shall not be responsible for 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 such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *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.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. 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: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. 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 a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, 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 Documents. 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 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds 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 each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. 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; and
 6. 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.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and 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;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full 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 interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 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, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, 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.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies 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 of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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 as trustee 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 utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.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, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *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. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- 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.

6.02 *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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, 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.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "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 specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion 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, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, 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; and
 - 3) it has a proven record of performance and availability of responsive service.
- 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.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. 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:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) 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

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.
- C. 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. 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 moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. 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.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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 knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *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.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. 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 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 by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other 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 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 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 property to stresses or pressures that will endanger it.

6.12 *Record Documents*

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

6.13 *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, 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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- 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 6.13.A.2 or 6.13.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 (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 for protection of the Work 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 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *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.

6.15 *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.

6.16 *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.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- 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 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. 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 6.17.D.

B. 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. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each 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 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 and approval of that 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 both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval 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 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

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.

6.18 *Continuing the Work*

- A. 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, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *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 representation of 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 or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. 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 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 6.20.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 6.20.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.

6.21 *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 law.
- 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, Shop Drawings 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 6.21, 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 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *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.

8.12 *Compliance with Safety Program*

- 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 pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with 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, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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 Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. 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; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *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.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs 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 11.01.B, 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, 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 11.01.
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 5.06.D), 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 telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which 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 Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work 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 or when a Claim for an 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 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

11.02 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:*
 1. Contractor agrees that:
 - a. 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
 - b. 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:*
 1. 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.

11.03 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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 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; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor 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 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - 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 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests 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.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 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 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. 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) will be paid by Contractor.
- 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 13.07, 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 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *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 in accordance with Paragraph 13.06.A, 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, 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 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A 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.

14.02 *Progress Payments*

A. 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 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.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 9.07, 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 Documents; 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 moneys 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. 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;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor remedies the reasons for such action.
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 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. 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 tentative list.

14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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.

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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 - 3. Contractor's repeated disregard of the authority of Engineer; or
 - 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 - 2. 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
 - 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *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;
 - 3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) 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 15.03.

- 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *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 to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

17.03 *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 Documents. 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.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *Headings*

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

SECTION 00800

SUPPLEMENTARY CONDITIONS TO THE GENERAL CONDITIONS

The following supplements modify, change from or add to the Standard General Conditions of the Construction Contract, EJCDC Document C-700, 2007 Edition. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions shall remain in effect.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01.A Add the following sentence to “27. Notice of Award”: “When requested by OWNER, the Notice of Award may be issued by the ENGINEER.”

SC-1.01.A Add the following sentence to “28. Notice to Proceed”: “When requested by OWNER, the Notice to Proceed may be issued by ENGINEER.”

SC 1.01.A Add the following new Defined Terms:

53. ARCHITECT/ENGINEER – The person, firm or corporation named as the ENGINEER in the Agreement.

54. Provide – As used in the Project Manual, means to furnish and install, complete and ready for intended use.

55. Product - As used in the Project Manual, includes materials, fabrications, systems and equipment.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.02.A In the first line, change the term “...ten...” to read “...three...”.

SC-2.03.A Delete Paragraph 2.03.A in its entirety and replace with the following:

“2.03 Commencement of Contract Times: Notice to Proceed

A. The date of commencement of the Work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the OWNER-CONTRACTOR Agreement or such other date as may be established therein.”

SC-2.05.A Add the following new subparagraphs to paragraph 2.05A:

“4. CONTRACTOR shall perform no portion of the Work at any time without Contract Documents or, where specified, approved Shop Drawings for such portion of the Work.

5. By executing the Contract, CONTRACTOR represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.”

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01.B Add the following sentence to Paragraph 3.01B: “CONTRACTOR shall be responsible for the construction and coordination of the parts of the Project, and all systems provided shall be completely compatible and fully functional without additional cost to OWNER.”

SC-3.02.A. Add the following new subparagraph to paragraph 3.02.A:

“3. Sections of Division One - General Requirements govern the execution of all sections of the Specifications.”

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCED POINTS

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

“A. No reports on drawings related to Hazardous Environmental Conditions are known to Owner.

B. Not Used.”

ARTICLE 5 - BONDS AND INSURANCE

SC-5.04.A In the first line of Paragraph 5.04.A, following the word” ...maintain...”, insert the words, “...in a company or companies licensed to do business in the State of Florida,...”.

SC-5.04.A. 1 Add the following to the end of the paragraph. “Contractor’s claiming a worker’s compensation statutory exemption shall not be allowed to perform work under this Agreement without a separate worker’s compensation policy;”

SC-5.04 Add the following new paragraph immediately after paragraph 5.04.B:

C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Worker’s Compensation, and related coverages under paragraphs 4.04.A.1 and A.2 of the General Conditions:
 - a. State Statutory

- | | | |
|----|--|----------------------|
| b. | Applicable Federal
(e.g. Longshoreman's): | Statutory |
| c. | Employer's Liability | Limits Provide Below |
2. Contractor's General Liability under paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:
- | | | |
|----|--|-------------|
| a. | General Aggregate | \$2,000,000 |
| b. | Products - Completed Operations Aggregate | \$1,000,000 |
| c. | Personal and Advertising Injury | \$1,000,000 |
| d. | Each Occurrence (Bodily injury and Property Damage) | \$1,000,000 |
| e. | Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable. | |
| f. | Excess or Umbrella Liability | |
| | 1) General Aggregate | \$1,000,000 |
| | 2) Each Occurrence | \$1,000,000 |
3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:
- | | | |
|----|---|--------------|
| a. | Combined Single Limit per occurrence of | \$ 1,000,000 |
|----|---|--------------|
4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

a.	Bodily Injury	
	Each Accident	\$1,000,000
	Annual Aggregate	\$1,000,000
b.	Property Damage:	
	Each Accident	\$1,000,000
	Annual Aggregate	\$1,000,000
5.	Builders Risk	Full Replacement
6.	Environmental Pollution Liability	
	Bodily injury, Property Damage and	
	Cleanup cost.	
a.	Each Occurrence	\$1,000,000
	Annual Aggregate	\$1,000,000

SC-5.05.A. Delete Section in its entirety and insert the following in its place:

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Contractor may purchase and maintain at Contractor's expense Contractor's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

A. A CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:

2. be written on a Builder's Risk "all-risk" open peril or special causes of loss policy form that shall at least include insurance for physical loss and 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, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, wind, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and
5. allow for partial utilization of the Work by OWNER;
6. including testing and startup; and
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. CONTRACTOR shall be responsible for any deductible or self-insured retention.

C. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph SC-5.06 shall comply with the requirements of paragraph 5.06.C of the General Conditions.

SC-5.06.B Delete paragraph 5.06.B in its entirety and insert in its place:

B. Contractor shall be responsible for any deductibles or self-insured certificates.

SC-5.06.C Delete and replace the policies of insurance required to be purchased and maintained by the Contractor, in accordance with this paragraph SC-5.06 shall comply with the requirements of paragraphs in 5.06C of the general conditions.

SC-5.06.E Delete Paragraph 5.06 E and replace with the following:

E. Environmental Pollution Liability Insurance: Shall be maintained by the Contractor for sudden and gradual occurrences arising out of the work being performed by or on behalf of the Contractor under this Contract. Coverage shall include but not be limited to, all hazardous materials identified under said Contract. Coverage shall respond to claims for pollution condition resulting in bodily injury and property damage to others and for clean-up costs. The extended claims reporting period following completion of the task, shall no be less than thirty-six (36) months. Deductible applicable subject to the written approval of the Owner and shall be the responsibility of the Contractor. The limit of coverage shall not be less than:

Bodily Injury, Property Damage and Clean Up Costs	<u>\$1,000,000.00</u>	Each
	Occurrence	

ARTICLE 6 - CONTRACTORS'S RESPONSIBILITIES

SC-6.03.B Add the following after Paragraph 6.03.B: "The use of asbestos or asbestos-based fiber materials is prohibited in this Project."

SC-6.06. Add the following sentence at the end of paragraph 6.06.G:

"H. OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other individuals or entity, to the extent practicable, information about amounts paid to CONTRACTOR on account of Work performed for CONTRACTOR by a particular Subcontractor, Supplier, or other individual or entity."

SC-6.13 Add the following new paragraph:

"C. The Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 Subpart P trench safety standards are in effect during the period of construction of the Project. In compliance with current State of Florida statutes, the Contractor or subcontractor performing trench excavation work on the Project shall comply with the applicable trench safety standards."

SC-6.13 Add the following new paragraph at the end of paragraph 6.13 D:

"E. All Contractors or Entities performing or furnishing any work for Clay County Utility Authority ("CCUA") must carry Workers' Compensation insurance coverage for themselves and for any employees, independent contractors, and/or other individuals who perform work on the project under the supervision of the Contractor or Entity. All those providing work shall furnish CCUA with evidence, which shall be in form and content satisfactory to CCUA, of current Workers' Compensation insurance coverage secured by the Contractor or Entity for themselves and employees, independent contractors, and/or any other individuals performing or furnishing any of the work on the project before any Contractor or Entity, employees, independent contractors and/or any other individuals begin work on the project."

SC-6.17 Add the following new paragraphs immediately after Paragraph 6.17.E:

"F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.

G. In the event that Contractor requests a substitution for a previously approved item, Contractor shall reimburse Owner for Engineer's charges for such time unless the need for such substitution is beyond the control of Contractor."

SC-6.20 Add the following new Paragraph:

“D. In conformance with the requirements of Section 725.06, Florida Statutes, the specific considerations for CONTRACTOR’s promises are:

1. One dollar (\$1.00) in hand paid by OWNER, ENGINEER, and ENGINEER’s employees to CONTRACTOR, receipt whereof is hereby acknowledged and the adequacy of which CONTRACTOR accepts as completely fulfilling the obligations of OWNER, ENGINEER, and ENGINEER’s employees under the requirements of Section 725.06, Florida Statutes, and;
2. The entry of OWNER and CONTRACTOR into the construction contract because, but for CONTRACTOR’s promises as contained in the General Conditions, OWNER would not have entered into the construction contract with CONTRACTOR.”

ARTICLE 7 - OTHER WORK AT THE SITE

SC-7.04 Add the following new paragraph immediately after paragraph GC-7.03:

SC-7.04 Claims Between Contractors

“A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor’s performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by non-binding mediation or at law.

B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, Engineer’s Consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor’s performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.

C. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities."

ARTICLE 8 – OWNER'S RESPONSIBILITIES

SC-8.01.A Add the following to the end of the sentence, "or Owner's Representative.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

SC-12.01.B Add the following paragraph after Paragraph 12.01.B.3:

"4. where the work involved is covered by unit prices and the volume of work exceeds one hundred fifty percent (150%) of the quantity shown in the Bid Form or Approved Schedule of Values, the Owner reserves the right to renegotiate a better unit price. Or,

5. where the work involved is Lump Sum in the Contract Documents and the estimated quantity contained in the Bid Form is less than one hundred thirty percent (130%) of the actual quantities involved shall be considered included in the Contractor's Lump Sum price. Substantial differences from the estimated quantities to actual quantities are defined as greater than 130%, and the Owner reserves the right to renegotiate a better unit price, by mutually agreed Lump Sum (which may include a reasonable allowance for O&P not necessarily in accordance with Paragraph 12..01.C.2)."

ARTICLE 13 – TESTS AND INSPECTIONS, CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.07.A Delete first sentence and replace with the following:

A. If within two (2) years 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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions.

SC-13.09 Add the following Paragraph 13.09.E.:

If at any time during the construction, the OWNER deems that work are to be unsafe and after proper notification to the CONTRACTOR of the unsafe conditions, the CONTRACTOR fails to take within 24 hours the necessary precautions to rectify the unsafe conditions to the satisfaction of the OWNER, the OWNER may correct the unsafe conditions by whatever means the OWNER deems appropriate. The cost for correction of unsafe conditions shall be paid by the CONTRACTOR and any additional work the may result from the OWNER's actions needed to continue work on the project.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02.C.1 In the first line of Paragraph 14.02.C.1, change "Ten days..."to read "Forty-five days...".

ARTICLE 16 - DISPUTE RESOLUTION

SC-16.01 Delete Paragraph 16.01.C in its entirety and insert the following in its place:

"C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. gives to the other party written notice of intent to submit the Claim to a court of competent jurisdiction, or
2. agrees with the other party to submit the Claim to another dispute resolution process.

SC-16.01.D Add the following new paragraph immediately after Paragraph SC-16.01.C.

D. Notwithstanding any applicable statute of limitations, a party giving notice under Paragraph SC-16.01.C.1 shall commence an action on the Claim within one year of giving such notice. Failure to do so shall result in the Claim being time-barred and Engineer's action or denial shall become final and binding."

END OF SECTION

SECTION 00900

ADDENDA AND MODIFICATIONS

Bidding addenda and/or modifications issued prior to signing of the construction agreement are to be attached hereto.

END OF SECTION

SECTION 01010

SUMMARY OF WORK

PART 1 – GENERAL

1.1 Location of Work: **Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract**

- Various locations in Clay County, Florida.

1.2 Description of Work: The work consists of furnishing all labor, materials and equipment necessary to complete the following:

- This Project is a five (5) year continuing contract for work that consists of furnishing all labor, materials and equipment necessary to rehabilitate sanitary sewers, manholes and/or wetwells. Owner shall furnish construction plans to identify the work for which purchase orders will be issued.

1.3 Contractor's Duties: Except as specifically noted, the Contractor shall provide and pay for the following:

- A. All labor, materials, and equipment.
- B. Tools, construction equipment, and machinery.
- C. Utilities required for construction.
- D. Temporary portable bathrooms, and other services and facilities necessary for the proper execution of work completion including incidental items not detailed or called for, but which are required for the proper completion of the project.
- E. All legally required sales, consumer, and use taxes.
- F. All applicable permits, government fees, and licenses.
- G. Survey services for construction layout and record drawings.
- H. All required testing and clearances for placing into service.

1.4 Contractor Shall Also Be Required to Perform the Following:

- A. Comply with all codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on the performance of work.

- B. Promptly submit written notice to the Engineer of observed variances of Contract Documents from legal requirements; it is not the Contractors responsibility to make certain drawings and specifications comply with codes and regulations.
- C. Enforce strict discipline and good order among employees. Do not employ unfit persons or those not skilled in assigned tasks.
- D. Provide and submit a Construction Work Plan, Critical Path Schedule and Quality Control Plan to the Owner.

1.5 Work Sequence:

- A. Coordinate with Owner.
- B. Contractors Critical Path construction schedule will be subject to acceptance by the Engineer and updated on a monthly basis.
- C. Notify Engineer and Owner 96 hours (minimum) in advance of removing any facility from service, permanently or temporarily. Removal from service of any facility shall be pre-approved by Owner.

1.6 Contractors Use of the Premises:

- A. Do not unreasonably encumber sites with materials or equipment.
- B. Assume full responsibility for protection and safekeeping of products stored on premises.
- C. Move any stored products interfering with the Owner's operations.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES:

Administrative and procedural requirements for determining Work completed under unit price contract.

1.2 GENERAL REQUIREMENTS

- A. Unit prices shall include the providing of all cost required for the complete construction of the specified unit of work including cost of installation labor, including social security, insurance, and other required fringe benefits, workman's compensation insurance; rental or purchase of equipment and machinery; taxes; testing; surveys; temporary storage site and other incidental expenses; and supervision.
- B. The Owner reserves the right to reject the Contractor's measurement of completed work that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.
- C. Contract Sum adjustments will be by Change Order on basis of net accumulative change for each unit price category.
 - 1. Except as otherwise specified, unit prices shall apply to both deductive and additive variations of quantities.
 - 2. Unit prices in the Agreement (or the most recent Change Order adjust said unit prices) shall remain in effect until date of final completion of the entire Work for each purchase order.
- D. Unit Price Abbreviations:
 - 1. AC – Acre
 - 2. CY – Cubic Yards
 - 3. EA – Each
 - 4. GA – Gallons
 - 5. LB - Pounds
 - 6. LF – Linear Feet
 - 7. LS – Lump Sum

8. MI – Miles
9. SF – Square Feet
10. SY - Square Yards
11. TN – Tons
12. VF – Vertical Feet.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 MEASUREMENT

- A. Part A – Treatment Plant Wetwell Rehabilitation: Surface area for Surface Preparation and Material Installation will be measured on the exposed interior of the wetwell that receives treatment. The work shall include mobilization and all activity performed to complete the project. Bypass pumping and equipment removal will be performed by others.
- B. Part B - Manhole or Lift Station Wetwell Rehabilitation
 1. Clean and Coat New/Old Sanitary Sewer Manhole (4 or 5-foot diameter): Measure vertical feet from the top of the manhole cast iron frame to the bottom of the lowest invert and from the top of wetwell to the top of the bottom floor at its lowest spot.
 2. Clean and Coat Existing Wetwell: Measure square feet as the surface area of the interior of the wetwell that receives treatment.
 3. Interior Manhole Coating/Lining Repair: Measure square feet as the surface area of the interior of the manhole that receives treatment.
 4. Adjust manhole frame and cover (adjustment rings not to exceed 12"): Count each adjustment ring.
 5. Adjust manhole frame and cover with cone or riser section (Each additional foot over initial 12"): Measure vertical feet for cone or riser section installed.
 6. Replace frame & cover (24" or 36"): Count each replaced.
 7. Invert replacement: Count each replaced.
 8. Inside drop System 4"-8" or 10"-12": Count each replaced.
 9. Stop Leak Repair (no lining): Count each manhole repaired.

10. Maintenance of Traffic: Traffic Control shall be based on the Florida Department of Transportation (FDOT) Maintenance of Traffic Standard indices required by Clay County of FDOT to be utilized for each particular Purchase Order.
11. Emergency Response Mobilization: Payment shall be for mobilization costs performed within 24 hours of request. All other components of the project shall be measured per appropriate line item.
12. Construction Video and Photographs: Count per each Purchase Order.

C. Part C - Sanitary Sewer Rehabilitation – Cured-in-Place Pipe (CIPP)

1. Sanitary Sewer Line Cleaning and Inspection
 - a. Light Cleaning, Tuberculation Cleaning and Root Removal: Measure the linear footage from the center of the upstream manhole to the center of the downstream manhole.
 - b. CCTV Pipe Inspection: Television inspection shall be the linear footage measures from the center of the upstream manhole to the center of the downstream manhole of pipe of each size diameter recorded. Pay item is for main line only, lateral payment is included in lateral rehabilitation pay item.
 - c. Clean & CCTV Inspection – Sewer Lateral: Payment for cleaning and CCTV of a lateral when no lining is performed.
 - i. Length 0 to 40 feet – per each lateral
 - ii. Length over 40 feet – per linear foot.
2. Sanitary Sewer Rehabilitation
 - a. CIPP Lining – Measure the linear footage from the center of the upstream manhole to the center of the downstream manhole.
 - b. Sectional CIPP Lining – Count each instance of installation.
 - c. Lateral CIPP Lining – Count each instance of installation.
 - d. Cleanout Installation – Count each instance of installation.
 - e. Site Restoration – Measure per the square footage of restoration.
3. Dewatering: Measure per linear foot of affected area dewatered.
4. Erosion and Sediment Control: Measure per linear foot of installed control measures.
5. Tanker Trucks: Cost shall be based on the daily rate (8 hours) for one tanker truck.

6. Maintenance of Traffic: Traffic Control shall be based on the Florida Department of Transportation (FDOT) Maintenance of Traffic Standard indices required by Clay County of FDOT to be utilized for each particular Purchase Order.
7. Emergency Response Mobilization: Payment shall be for mobilization costs performed within 24 hours of request. All other components of the project shall be measured per appropriate line item.
8. Construction Video and Photographs: Count per each Purchase Order.

3.2 PAYMENT

- A. Payment will be made at the respective contract unit prices for each item shown in the Agreement, installed and accepted, which price and payment shall constitute full compensation for performing all Work in connection therewith and incidental thereto.
 1. No separate payment will be made for the preparation of the final video log(s) of the completed project.
 2. Partial payment for each work order shall be made for initial cleaning and televising at the Contract unit pricing.
 3. No partial payment shall be made for CIP pipelines or manholes/wetwells until the tests are approved by the Owner. Generally, completion of the pipeline or manhole/wetwell lining system and testing shall constitute 75% completion.
 4. Prior to substantial completion being issued the CIPP or manhole/wetwell must be inspected and tested, video logs provided, and all services or drop pipes re-connected. This shall constitute 90 completion.
 5. The rehabilitation shall be considered 100% complete and ready for final payment when the work for each of the above 2 items are complete along with the final video log(s) and the site restoration and clean-up are complete. Payment shall be made based on the final quantities of each rehabilitation method installed and approved at the Contract unit pricing.
- B. Except for Emergency Response Mobilization, separate payment will not be made for mobilization, demobilization, re-mobilization or by-pass pumping. The cost for these items shall be included in the unit pricing for the pay items listed in the bid form.

3.3 PROTECTION

- A. Where pavement, trees, shrubbery, fences or other property or surface structures not designated as pay items have been damaged, removed or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the Contract Documents, state laws, municipal ordinances or the specific direction of the Owner, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the Contractor to a condition equal to that before work began within a time frame approved by the Owner.

END OF SECTION

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CCUA Bid No. 18/19-A7
Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

MEASUREMENT AND PAYMENT
April 2019

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES:

Administrative and procedural requirements governing the Contractor's Applications for Payment.

1.2 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

- a. Contractor's Construction Schedule.
- b. Application for Payment forms, including Continuation Sheets.
- c. List of subcontractors.
- d. Schedule of allowances.
- e. List of products.
- f. List of principal suppliers.

B. Format and Content:

1. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
2. Unit-Cost Allowances: Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents. Use a separate line for each pay item.
3. Schedule Updating: Update and resubmit the Schedule of Values and Drawdown Schedules prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum. Update Schedules when Change Orders or Construction Changes directive result in change in contract duration prior to the next application for Payment.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Owner's Representative and paid for by the Owner. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment-Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days prior to the date for each progress payment.
- C. Payment-Application Forms: Use forms provided by the Owner for Applications for Payment. Same copies are included in Section 00640.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Owner will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit three (3) signed and notarized original copies of each Application for Payment to the Owner by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.
- F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors, vendors, and suppliers for the construction period covered by the previous application.
 - 1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers for such items.
 - 3. Waiver Forms: Submit waivers of lien on forms which comply with State statutes, and executed in a manner, acceptable to the Owner.

- G. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
1. List of subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Schedule of principal products.
 6. Schedule of unit prices.
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from governing authorities for performance of the Work.
 11. Initial progress report.
 12. Report of preconstruction meeting.
 13. Certificates of insurance and insurance policies.
 14. Performance and payment bonds.
 15. Data needed to acquire the Owner's insurance.
 16. Initial settlement survey and damage report, if required.
- H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Warranties (guarantees) and maintenance agreements.
 - b. Test/adjust/balance records.
 - c. Maintenance instructions.
 - d. Final cleaning.
 - e. Final progress photographs.
 - f. List of incomplete Work, recognized as exceptions to Owner's Acceptance of Substantial Completion.

I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Ensure that unsettled claims will be settled.
4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
5. Transmittal of required Project construction records to the Owner.
6. Proof that taxes, fees, and similar obligations were paid.
7. Removal of temporary facilities and services.
8. Removal of surplus materials, rubbish, and similar elements.
9. Change of door locks to Owner's access.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

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SECTION 01060

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 Related Documents:

The general provisions of the Contract, including General and Supplementary Conditions apply to the work specified in this section.

1.2 Specified Codes:

- A. The design of the work is based on the requirements of the latest edition of the Florida Building Code, National Electric Code and National Fire Protection Association Requirements, whichever is most stringent.
- B. The site work is based on the latest edition of the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, hereinafter referred to as the Florida DOT Specifications or DOT Spec.
- C. The Contractor shall ensure the work complies to the aforementioned codes and regulations as they apply to the project whether or not specifically referenced elsewhere.

1.3 Reference Standards:

- A. Except as otherwise required by Paragraph 1.2 all products and workmanship shall conform to best quality materials and practices recognized by agencies, associations, councils, etc., specified in individual sections.
- B. In the absence of specified agencies, associations, councils, etc., the Contractor shall conform to the requirements of the most widely recognized standards for each particular portion of the work.

1.4 Permits:

Determination of necessity and/or application for and receipt of the following permits will be required of the Contractor, unless otherwise noted. The Contractor shall comply with all provisions of these permits. No work shall commence until all required permits are in hand.

- A. The Contractor shall secure any and all permits as required by SJRWMD for dewatering activities to occur at the job sites.
- B. Owner shall obtain and the Contractor shall perform and comply with the requirements or Rights-of-Way all work-related activities in accordance with the requirements of the Authority's FDOT and /or Clay County Use Permits for this project where applicable.

- C. Contractor shall secure any and all NPDES – Generic Permit for the Discharge of Produced Groundwater from any Non-Contaminated Site Activity. Contact Florida Department of Environmental Protection (FDEP), Northeast District.
- D. Owner shall obtain and the Contractor shall conform to the requirements of the FDEP potable water and/or wastewater collection/transmission permit(s) and shall be responsible for installing and testing mains to achieve clearance under this permit, where applicable. Permit documents shall be provided with each purchase order. Installation of the pipelines shall be done so as to allow Owner to meet the requirements and stipulations of this permit.

1.05 EASEMENTS: Where, the Clay County Utility Authority has entered into an agreement with the landowners to grant unobstructed right-of-way and easement rights along the pipeline route, the terms and conditions of these easements shall be followed explicitly by the Contractor. Copies of these Agreements for Grant of Easement will be made available from the Authority and the Contractor shall familiarize himself with the terms and conditions and shall comply with all provisions during construction.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.1 Section Includes

- A. Administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Contractor's construction schedule using the Critical Path Method (CPM)
 - 2. Shop Drawings.
 - 3. Product Data.
 - 4. Samples.
 - 5. Quality assurance submittals.

1.2 Definitions

- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.3 Submittal Procedures

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow 15 working days for initial review. Allow additional time if the Owner must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow 15 working days for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Owner sufficiently in advance of the Work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 2. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name and address of the Owner.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Owner using a transmittal form. The Owner will not accept submittals received from sources

other than the Contractor without Contractor's review and approval markings and the action taken.

- D. Provide required Product Code Certification with Shop Drawings. Submittals that do not have Product Code Certification included will be returned for resubmission.

1.4 Contractor's Construction Schedule

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit within 20 days after the date established for "Commencement of the Work."
 - 1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
 - 2. Coordinate the Contractor's Construction Schedule with the Work Plan, (CPM) Schedule, list of subcontracts, payment requests, and other schedules.
 - 3. Identify critical paths.
- B. Phasing: On the schedule, show how requirements for phased completion to permit Work by separate Contractors and partial use by the Owner affect the sequence of Work.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Owner, Owner, subcontractors, and other parties required to comply with scheduled dates. Keep copies available at the project site. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 Shop Drawings

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents.

1. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings.
 2. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
1. Dimensions.
 2. Identification of products and materials included by sheet and detail number.
 3. Compliance with specified standards.
 4. Notation of coordination requirements.
 5. Notation of dimensions established by field measurement.
 6. Do not use Shop Drawings without an appropriate final stamp indicating action taken.
- C. Submittals: Submit one reproducible and two blue-or black line print.

1.6 Product Data

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Product Data not so marked will be returned without review. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
- B. Submittals: Submit 3 copies of each required submittal; submit 4 copies where required for maintenance manuals. Submit additional copies as required by the Contractor for distribution. The Owner will retain one and will return the others marked with action taken and corrections or modifications required.
- C. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities.

1.7 Samples

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 1. Mount or display Samples in the manner to facilitate review of qualities indicated. Prepare Samples to match the Owner's sample. Include the following:
 - a. Specification Section number and reference.
 - b. Generic description of the Sample.
 - c. Sample source.
 - d. Product name or name of the manufacturer.
 - e. Compliance with recognized standards.
 - f. Availability and delivery time.
 2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.

3. Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices. The Owner will review and return preliminary submittals with the Owner's notation, indicating selection and other action.
 4. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

1.8 Quality Assurance Submittals

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control."
- D. Contractor shall submit for approval a "Contractor Quality Control Plan" which shall contain, as a minimum, Contractor's quality control plan for earthwork, concrete reinforcement, and poured-in-place concrete.
1. The contractor quality control plan (CQCP) is the documentation of the contractor's process for delivering the level of construction quality required by the contract. The following paragraph provides requirements for the CQCP, and what the criteria for accepting and using the requirements for these plans will be.
 2. The CQCP is a framework for the contractor's process for delivering quality construction. The plans and specifications define the expected results or outcome. The CQCP shall outline how those results will be achieved. While it is not possible to determine from the CQCP whether the level of construction quality will be acceptable, it is possible to verify that the contractor, as an organization, has addressed the basic elements of its quality process.

1.9 Owner's Action

- A. Except for submittals for the record or information, where action and return is required, the Owner will review each submittal, mark to indicate action taken, and return promptly. Compliance with specified characteristics is the Contractor's responsibility regardless of action indicated.
- B. Action Stamp: The Owner will stamp each submittal with a uniform, action stamp. The Owner will mark the stamp appropriately to indicate the action taken. Do not use, or allow others to use, submittals marked "Not Approved, Revise and Resubmit", or "Rejected" at the Project Site or elsewhere where Work is in progress.
- C. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Owner will return the submittal marked "Action Not Required", "Reviewed, No Comment", or "Reviewed, Comments As Noted."
- D. Unsolicited Submittals: The Owner will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01320

CONSTRUCTION VIDEO AND PHOTOGRAPHS

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. Provide construction video and photographs that depict preconstruction conditions.
- B. Provide construction photographs that depict the progress of the Work and conditions at the final inspection.

1.02 SUBMITTALS:

- A. Submit electronic version of preconstruction video and photographs prior to construction.
- B. Submit two (2) copies of each set of progress photographs weekly to the Owner.
- C. All projects constructed within the Clay County Utility Authority (“CCUA”) systems shall have construction photographs taken by the contractor who is installing those utility mains, services, or other appurtenances, which will be owned and maintained by or under the control of CCUA as follows in PART 3 – EXECUTION.
- D. Submit final photographs with final pay request.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION:

- 3.01 Photographs shall be taken with a conventional digital camera and show the area affected by the Work. The photographs shall be in color, 5-inches by 7-inches in size, printed on 8½” x 11” paper with a maximum of two pictures per page. The Contractor shall use a minimum photography resolution of 2048 x 1536 pixel (3 megapixels).
- 3.02 Photographs shall be taken prior to any Work on the Site, upon completion of underground piping or structures installation and prior to backfilling, and upon completion of the backfilling and grading.
- 3.03 The photographs taken daily during a given weekly period shall be delivered to the Owner at the beginning of the following week. Photographs may be delivered by electronic mail.
- 3.04 Each photograph shall be dated and labeled in a manner that will clearly describe the Work and the location of the photograph in relation to the project. The location description shall include the roadway name, lot number, station number, physical address

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if available, or other means of providing information to determine the accurate location where the photograph was taken.

- 3.05 The Contractor shall use color video with a minimum resolution of 1920 x 1080 pixels (1080p) for full high definition (HD).
- 3.06 Color video and photographs shall be taken prior to any work on the site documenting all existing conditions.
- 3.07 Digital versions of video or photographs shall be submitted on a USB flash drive or archival quality DVD.

END OF SECTION

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SECTION 01400
QUALITY CONTROL

PART 1 - GENERAL

1.1 Section Includes

- A. Administrative and procedural requirements for quality control services and testing and inspection laboratory services.

1.2 General

- A. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
- B. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
- C. Requirements for the Contractor to provide quality control services required by the Owner or authorities having jurisdiction are not limited by provisions of this Section.

1.3 Contractor Responsibilities

- A. Provide inspections, tests and similar quality control services specified in individual Specification Sections as the Contractor's responsibility and as required by governing authorities, except for those specifically indicated as being the Owner's responsibility; these services include those specified to be performed by an independent agency and not by the Contractor. Include costs for these services in the Contract Sum.
- B. Provide and pay for costs of retesting and other related costs when:
 - 1. Results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
 - 2. Construction is revised or replaced by the Contractor, where tests were required on original construction.
 - 3. Additional testing is needed or required by the Contractor.

4. Additional trips to the project are necessary by an agency when scheduled times for tests and inspections are cancelled and the agency is not notified sufficiently in advance of cancellation to avoid the trip.
- C. Cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested.
1. Notify the agency sufficiently in advance of operations to permit assignment of personnel.
 2. Provide access to the Work and furnish incidental labor and facilities necessary to facilitate inspections and tests.
 3. Take adequate quantities of representative samples of materials that require testing and assist the agency in taking samples.
 4. Provide facilities for storage and curing of test samples.
 5. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 6. Secure and protect samples and test equipment at the Project site.
- D. Coordinate the sequence of activities to accommodate required services with a minimum of delay and coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
- E. Schedule times for inspections, tests, taking samples and similar activities.

1.4 Testing Agencies Responsibilities

- A. Cooperate with the Owner and Contractor in performance of their duties; provide qualified personnel to perform required inspections and tests.
- B. Notify the Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of their services.
- C. Agencies are not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
- D. Agencies shall not perform any duties of the Contractor.

1.5 Submittals

- A. Independent testing agencies shall submit three (3) copies of certified written reports of each inspection, test or similar service to the Owner and to the Contractor.
- B. Report Data: Written reports of each inspection, test or similar service shall include:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making the inspection or test.
 - 6. Designation of the Work and test method.
 - 7. Identification of product and Specification Section.
 - 8. Complete inspection or test data.
 - 9. Test results and an interpretations of test results.
 - 10. Ambient conditions at the time of sample-taking and testing.
 - 11. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
 - 12. Name and signature of laboratory or inspector.
 - 13. Recommendations on retesting.

1.6 Qualification of Service Agencies

- A. Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.
- B. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

- C. Inspection and testing agencies engaged by the Contractor shall be acceptable to Owner.
- D. The Contractor shall use appropriately certified labs for the material tested such as the Florida Department of Transportation, the Florida Department of Environmental Protection, etc.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 Repair and Protection

- A. Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.
- B. Protect construction exposed by or for quality control service activities and protect repaired construction.
- C. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES

PART 1 - GENERAL

- 1.1 Description: The following criteria shall govern the furnishing of and paying for temporary construction and service items. Such items shall be instituted at the beginning and maintained for the life of the work or until removal or termination is approved by the Owner.
- 1.2 Temporary Facilities
- A. Drinking Water: The Contractor shall provide cool water with dispensing utilities.
 - B. Construction Water: The Contractor shall provide temporary water for construction at the project site. The Contractor shall provide proper back flow devices in order to comply with regulations concerning back flow & cross connection.
 - C. It shall be the Contractor's responsibility to provide temporary electrical power for construction purposes.
 - D. Toilet Facilities: The Contractor shall furnish a portable, job-site toilet enclosure facility through a local company specializing and licensed in this business. The toilet enclosure shall be located on the project site at a point acceptable to the Owner. It shall be maintained daily by the supplying company and removed from the project site upon completion of the project.
- 1.3 Security
- A. General: The Contractor shall provide security, as necessary or required, to protect work, property, materials and equipment at all times.
 - B. Rodents and Other Pests: The Contractor, through debris removal, etc., shall control the creation of rodent or pest problems. Should such develop, the Contractor shall secure services of a licensed exterminator to control.
 - C. Debris Control: Keep premises clean and free from accumulation of debris and rubbish. Provide trash and debris receptacles and require use. Remove from site at least weekly. Dispose all debris and rubbish at a properly approved and permitted facility or by using a properly licensed and permitted vender of no cost to the owner. The contractor shall provide the owner copies of all disposal tickets.

- D. Cleaning: As work is completed by trades, areas of work shall be cleaned in preparation for next trade, inspections or general safety of property and person.
- E. Project Safety: The Contractor shall comply with all applicable governmental and insuring company requirements relative to construction and project safety. Either the superintendent or another company representative on the site during all working hours, shall be trained in project safety and designated as Contractor's Safety Director.

1.4 Quality Assurance

- A. Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
 - 1. Building Code Requirements
 - 2. Health and Safety Regulations
 - 3. Utility Company Regulations
 - 4. Police, Fire Department and Rescue Squad Rules
 - 5. Environmental Protection Regulations
 - 6. Debris and rubbish transportation and disposal regulations and rules.

END OF SECTION

SECTION 01701

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 Section Includes

A. Administrative and procedural requirements for project closeout.

1. Inspection procedures.
2. Project record document submittal.
3. Final cleaning.

1.2 Substantial Completion

A. Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Submit specific warranties, final certifications and similar documents - refer to Section 01740.
3. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; operating certificates and similar releases.
4. Submit record drawings and similar final record information.
5. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
6. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

B. When the Contractor considers the Work to be substantially complete, they shall submit a written notice to the Owner that the Work, or designated portion of the Work, is complete and ready for inspection.

- C. Within 14 days of receipt of a request for inspection, the Owner will either proceed with inspection or advise the Contractor of unfulfilled requirements. When the Owner agrees that the Work, or designated portion of the Work, is substantially complete, they will inform the Contractor.
- D. Should the Owner determine that the Work is not substantially complete, they will advise the Contractor of construction or other requirements that must be completed or corrected.
 - 1. The Owner will repeat inspection when requested and assured that the Work has been substantially completed.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.3 Final Completion

- A. When the Contractor considers the Work to be complete, they shall submit written certification to the Owner that the Work is completed and ready for final inspection. Include the following:
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted.
 - 2. Submit an updated final statement.
 - 3. Submit a certified copy of the Owner's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Owner's inspector.
- B. The Owner will inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Owner.
 - 1. Upon completion of inspection, the Owner will advise the Contractor if the Work that is complete or if obligations have not been fulfilled but are required for final acceptance.
 - 2. If necessary, re-inspection process will be repeated.

1.4 Record Document Submittals

- A. Maintain at the site one complete set of record documents; protect from deterioration and loss in a secure, fire-resistive location.
 - 1. Provide access to record documents for the Owner's reference during normal working hours.
 - 2. Label each document "PROJECT RECORD" in 2-inch-high printed letters.
 - 3. Do not use for construction purposes.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 - 2. Mark new information that was not shown on Contract Drawings or Shop Drawings.
 - 3. Show elevations and horizontal control dimensions of storm sewers, gravity sewers including laterals, electric cables, television cables, telephone cables, force mains, water mains crossed, and any other underground utilities and structures. Information shall be obtained by surveying by a professional engineer or land surveyor registered in the State of Florida.
 - 4. Note related Change Order numbers where applicable.
 - 5. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.
 - 1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.

2. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 3. Note related record drawing information and Product Data.
- D. Record Product Data: Maintain one copy of each Product Data submittal.
1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations.
 2. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation.
 3. Note related Change Orders and mark-up of record drawings and Specifications.
- E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Owner to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work.
- G. At Contract close-out, deliver one copy of Record Documents to Owner. Accompany submittal with transmittal letter in duplicate containing the following information:
1. Date
 2. Project title and number
 3. Contractor's name and address
 4. Title and number of each Record Document
 5. Signature of Contractor or his authorized representative

PART 2 - PRODUCTS (Not Applicable)

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PART 3 - EXECUTION

3.1 Final Cleaning

- A. Employ experienced workers or professional cleaners for final cleaning.
- B. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion and maintain until final completion, except in areas occupied or designated by Owner.
 - 1. Remove labels that are not permanent labels.
 - 2. Leave concrete floors broom clean.
 - 3. Wipe surfaces of mechanical and electrical equipment.
 - 4. Clean plumbing fixtures to a sanitary condition.
 - 5. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances.
 - 6. Sweep paved areas broom clean; remove stains, spills and other foreign deposits.
 - 7. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- C. Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
- E. Where extra materials of value remaining after completion of associated Work, they shall become the Owner's property, arrange for any disposition of these materials as directed.

END OF SECTION

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SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 Related Requirements

- A. General provisions of Contract, including General and Supplementary Conditions.
- B. Warranties and certificates for specific products - Respective Specification Sections.
- C. Contract closeout - Section 01701.

1.2 Section Includes

- A. Administrative and procedural requirements for warranties, bonds, and certifications required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

1.3 Warranty Requirements

- A. Contractor shall warrant all work covered under this Agreement to be free from defects for a period of 2-years after the date of substantial completion.
- B. Relining Underground Pipelines (Section 02766): Contractor warrants to Owner that all products and work provided by Contractor to Owner under this Agreement will be free from material defects in workmanship and materials for a period of five (5) years from the earlier of the date on which Contractor's work is accepted by Owner or the date on which the Contractor completes performance and leaves the worksite.
- C. Sanitary Service Lateral CIPP Lining (Section 02767): Contractor warrants to Owner that all products and work provided by Contractor to Owner under this Agreement will be free from material defects in workmanship and materials for a period of five (5) years from the earlier of the date on which Contractor's work is accepted by Owner or the date on which the Contractor completes performance and leaves the worksite.
- D. Manhole/Lift Station Wetwell Coating (Section 02768) and Treatment Plant Wetwell Liner (Section 02769): The liner manufacturer shall warrant the liner against defects for at least ten (10) years after the date of acceptance by CCUA. Defects are defined as cracking, delamination or leaking. The warranty shall require the manufacturer to supply all necessary labor, materials, and equipment to repair defects to the satisfaction of CCUA. The Contractor and/or manufacturer shall not make any exemption or exception to the above stated conditions or warranty.

- E. Treatment Plant Wetwell Rehabilitation (Section 02769): The liner manufacturer shall warrant the liner against defects for at least ten (10) years after the date of acceptance by CCUA. Defects are defined as cracking, delamination or leaking. The warranty shall require the manufacturer to supply all necessary labor, materials, and equipment to repair defects to the satisfaction of CCUA. The Contractor and/or manufacturer shall not make any exemption or exception to the above stated conditions or warranty.
- F. When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- G. When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- H. Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- I. Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
- J. The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- K. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.4 Submittals

- A. Submit written warranties to the Owner before requesting inspection for Substantial Completion. If the Owner's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.
- B. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit

properly executed warranties to the Owner within fifteen days of completion of that designated portion of the Work.

- C. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner for approval prior to final execution.
- D. Provide written certifications of compliance and other commitments and agreements for continuing services in a form which includes all pertinent information including:
 - 1. Quantities and dates of shipments.
 - 2. Attestment that materials incorporated into the Work comply with specified requirements. Certification shall not be construed as relieving the Contractor from furnishing satisfactory materials, if the material is later found to not meet specified requirements.
 - 3. Signature of officer of company.
 - 4. Laboratory test reports submitted with certificates of compliance shall show dates of testing, specification requirements under which testing was performed, and results of tests.
- E. Refer to individual Sections of Divisions 2 through 16 for specific content requirements, and particular requirements for submittal of special warranties.
- F. Form of Submittal:
 - 1. Compile 3 copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer.
 - 2. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 3. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 in. by 11 in. paper.
 - 4. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.

5. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

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MAINTENANCE WARRANTY BOND

CLAY COUNTY, FLORIDA

KNOW ALL MEN BY THESE PRESENTS, that we, _____
_____ as Principal and _____
, as Surety, are held and firmly bound unto the CLAY COUNTY UTILITY AUTHORITY, as Obligee,
in the sum of _____ (\$ _____)
Dollars, for the payment of which said Principal and Surety bind themselves, their heirs, administrators,
executors, successors and assigns, jointly and severally, firmly by the presents.

WHEREAS, the Principal is the contractor which installed the _____ for
the project known as **Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract
Bid No. 18/19-A7** has agreed that it shall accept certain _____
_____ improvements located within County right-of-ways or easements, for maintenance, provided that
the Principal and Surety deliver to the CLAY COUNTY UTILITY AUTHORITY a maintenance
warranty bond, guaranteeing said improvements against faulty workmanship and materials, said bond
and guarantee to be in full force and effect for a minimum of **two (2) years**, beginning the _____
day of _____, _____ (date of Substantial Completion); and this bond shall serve as said
maintenance warranty bond; and this bond shall be and remain in full force and effect from its effective
date for a minimum period of at least **two (2) years**.

NOW THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that if the
Principal shall fully guaranty, indemnify and save harmless Clay County Utility Authority from any and
all loss, costs, expenses and damages, for any repairs or replacements arising out of defective
workmanship or materials in the construction or installation of said improvements, then this obligation
shall be null and void; otherwise to be and remain in full force and effect.

Signed, sealed and dated this _____ day of _____, _____.

CONTRACTOR:

WITNESS:

Print Name: _____

By: _____ (Seal)

Print Name: _____

Date: _____

APPROVED:
CLAY COUNTY UTILITY AUTHORITY

BY:

BY: _____
Tom Morris, Executive Director

(SURETY)

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**WATER AND WASTEWATER
MAINTENANCE WARRANTY BOND
CONTACT INFORMATION**

Surety: _____

Contact Name: _____

Mailing Address: _____

Telephone No.: _____

Fax No.: _____

Bonding Agent: _____

License Identification No.: _____

Contact Name: _____

Mailing Address: _____

Telephone Number: _____

Fax Number: _____

CONTRACTOR WARRANTY

TO OWNER: CLAY COUNTY UTILITY AUTHORITY
3176 Old Jennings Road
Middleburg, Florida 32068

FROM CONTRACTOR: _____

PROJECT: Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract CCUA
Bid No. 18/19-A7

CONTRACTOR hereby warrants all materials and workmanship furnished for the _____
_____ installations for the above-referenced
project, against any defects for a period of **two (2) years** from the _____ day of _____
_____, _____ (date of Substantial Completion). This Warranty also includes the "as-
built" data recorded on the as-built drawings for this project.

This Warranty includes all expenses incurred in servicing or replacing defective material,
including cost of all parts, labor and/or replacement material.

This Warranty does not apply to any of the above equipment which has been subjected to
misuse, improper storage, neglect, accident, acts of God and/or alterations or repairs by other
than factory or the Guarantor's authorized service personnel. Nor does it cover expenses incurred
for service requested by the OWNER on material which does not prove defective.

CONTRACTOR: _____

Date: _____

Print Name: _____

Title: _____

SECTION 02140

DEWATERING

PART 1 - GENERAL

1.1 Scope

In general, the work specified in this section of the Specifications shall consist of supplying labor, materials and equipment, and performing all work necessary to lower and control the groundwater levels and hydrostatic pressures to permit all excavations and construction specified under this Contract to be performed in the dry.

1.2 Examination of the Site

The Contractor shall take all steps necessary to familiarize himself with the site conditions, the ground conditions and the groundwater conditions. It is expressly understood that neither the Owner's nor Owner's Representative will be held responsible for any interpretations or conclusions drawn by the Contractor.

1.3 Submittals

The Contractor shall schedule a pre-dewatering meeting with the Owner prior to executing the work. At the meeting the Contractor shall issue their formal written plan to the owner and discuss mitigating risks, discharges, and permitting.

PART 2 - PRODUCT

2.1 Method and Equipment

The Contractor may use any dewatering method they deem feasible so long as it results in working in stable soils conditions. It is the intent of these Specifications that an adequate dewatering system be installed to promptly lower, control, and dispose the groundwater in order to permit excavation, construction of the structures and the placement of the fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water bearing strata above and below the bottom of the foundations, sewers, water lines and all other excavations. Fill operations shall be completed prior to discontinuing operation of dewatering to prevent buoyancy of any structure. All dewatering operations shall be in accordance with applicable requirements of authorities having jurisdiction, such as, but not limited to, St. Johns River Water Management District and Florida Department of Environmental Protection.

PART 3 - EXECUTION

3.1 General

The Contractor shall be solely responsible for arrangement, location and depths of the dewatering system necessary to accomplish the work described under this section of the Specifications. The dewatering shall be accomplished in a manner that will reduce the hydrostatic head below any excavation to the extent that the water level and piezometer water levels in the construction area are below the prevailing excavation surface; will prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation strata; will maintain stability of the sides and bottom of the excavation; and will result in all construction operations being performed in the dry. It is the Contractor's responsibility to prevent surface water and subsurface or ground water from flowing into excavations.

3.2 Disposal of Water

The Contractor shall promptly dispose of all water removed from the excavations in such a manner as will not endanger public health, damage public or private property, or affect adversely any portion of the work under construction or completed by the Contractor. The Contractor shall obtain written permission from the Owner of any property involved before digging ditches or constructing water courses for the removal of water. Contractor shall apply for and obtain, at the Contractor's expense, from all agencies having jurisdiction all permits required for disposal of water resulting from dewatering operations. Contractor shall only discharge uncontaminated produced groundwater when permitted or exempt. The means and methods of dewatering and discharge disposal shall comply with all regulatory requirements (including F.A.C. Chapter 62-621 "General Permit for the Discharge of Produced Ground Water from Any Non-contaminated Site Activity") at the Contractors Expense. Water shall not be discharged into streets, roadways, driveways, or private property.

Where excavation and dewatering occur in soils containing clay, silt or other materials resulting in turbidity in excess of 29 NTU above background at the point of discharge, the Contractor shall provide for settling, filtering or other treatment to lower turbidity to this level. If the project contains stormwater retention and/or detention systems, the Contractor may temporarily use this area for treatment, by capping the bleed-down pipe, pumping discharge in the pond and allowing it to settle prior to discharge. The Contractor may also construct a temporary detention/treatment pond. Use of alum and polymeric coagulation agents to aid in settling is allowed, providing that pH is adjusted prior to discharge. The Contractor shall submit his dewatering plan to the Owner for review if such additives are used and submit pH test data to the Owner showing no greater than 1 pH unit change from background in water to be discharged. The Contractor shall remove all accumulation of sediment prior to the completion of the project as the Contractor's expense. The Contractor shall maintain and remove accumulation of sediment at suitable intervals to prevent impairment of any sediment basin or pond at the Contractor's expense.

3.3 Inadequate System

If the dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system, then loosening of the foundation strata, or instability of the slopes, or damage to the foundations, pavements, pipes, property, or structures may occur. The supply of all labor, materials and equipment, and the performance of all work necessary to carry out additional work for reinstatement of the structures or foundation soil resulting from such inadequacy or failure shall be undertaken by the Contractor to the approval of the Owner's Representative, and at no additional expense to the Owner.

END OF SECTION

SECTION 02221

TRENCHING, BACKFILLING AND COMPACTING

PART 1 - GENERAL

1.1 Scope

The work under this section covers the furnishing of all materials, equipment, tools, labor, supervision and incidentals necessary for excavating, backfilling and compacting trenches for underground pipelines and utilities as indicated on the drawings and specified herein.

1.2 Measurement and Payment

- A. Payment for Trenching, Backfilling, and Compacting is incidental to the Contractor's other pay items and shall be included in those costs.
- B. Payment will be full compensation for all material, equipment, testing, tools, supervision, incidentals, and labor for excavating, backfilling and compacting trenches for underground pipelines and utilities as indicated on the drawings and specifications herein.
- C. The measurement for earthwork quantities such as excavations, backfilling, and removal and replacement of unsuitable materials shall be based on the in-place verifiable cross section volume. Over excavations without documented cause and the Owner's written approval shall not be included in the calculated measurement.

1.3 Submittals

- A. Compaction density test reports.

PART 2 - PRODUCT

2.1 General Requirements

- A. Backfill material shall be a granular soil, not classified as unsuitable material, and capable of being placed and compacted to the densities equivalent to 95% of the Modified Proctor maximum dry density. Backfill shall have no more than 12 percent of its particles pass a No. 200 sieve or a Plastic Index (P.I.) that exceeds 6. The maximum size rock permitted in backfill material shall be 2 inches with such rock being uniformly dispersed in the soil. Rock or other hard, lumpy, and unyielding materials, however, shall not be permitted in backfill material within one foot of external diameters of pipe and conduit, or against structure having protective coatings and coverings. The Contractor shall provide backfill material when this material is

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not available from earthwork operations on the project site. Backfill material used for pipe bedding shall have all particles pass a 3/8-inch sieve.

- B. Unsuitable material is soil which is unsuitable for the support of structures, piping, or other materials. Unsuitable material shall be soils containing muck, clay, excessive amount of organic material, stumps, brush, roots, rubbish and building material rubble or other deleterious materials. The suitability of the excavated materials for backfill shall be determined by the Owner's Representative.
- C. Unsuitable material shall be disposed of offsite and replace with suitable imported sandy soils at the Contractor's expense.

2.2 Materials

- A. Excavated Native Material - Excavated native material free from perishable and objectionable objects and containing no stones or clods larger than two (2) inches in diameter, unless otherwise specified, shall be used for backfilling and such grading on the site as required. Any excess material shall be placed where directed.
- B. Granular Backfill - Granular backfill shall consist of well-graded crushed stone or crushed gravel meeting the requirements of American Standards of Testing and Materials (ASTM) C 33 (latest), Gradation 67 (3/4 inches to No. 4).
- C. Sand Backfill - Sand backfill shall consist of a coarse natural granular material, free of deleterious amounts of organic material, mica, loam, clay and other substances not suitable for the purpose intended. It shall be a clean concrete sand having approximately uniform gradation between sieve sizes No. 4 and No. 50. All particles shall pass a 3/8 inch sieve and no particles shall pass a No. 100 sieve.
- D. Backfill material shall be submitted to the Owner for review and approval.

PART 3 - EXECUTION

3.1 General Requirements

The extent of excavation open at any one time will be held to a minimum consistent with normal and orderly prosecution of the work. The Contractor is required to locate all underground structures and utilities, shown on the drawings or made known to him during construction. The Contractor is to coordinate with the local utility companies as required to determine the location of utilities within the limits of the work in adequate time to allow for relocation or adjustment of utility lines prior to conflict with the work, and to show the location of the utilities ahead of the work.

3.2 Protecting Existing Utilities

Each existing utility exposed is to be fully protected and supported during construction. Any damage caused during backfilling operations is to be promptly repaired at no cost to the utility owner. All temporary protective and support systems installed on existing utilities are to remain in place until they can be supported and protected by the trench backfill.

3.3 Excavated Material

- A. Excavated material to be used for backfill shall be neatly deposited at the sides of the trenches where space is available. Where stockpiling of excavated material is required, the Contractor shall be responsible for using designated sites and shall so maintain his operations as to provide for natural drainage and not present an unsightly appearance. Top soils shall be carefully selected and kept separated. Rock, shell or other base materials for roads and alleys shall be carefully selected and kept separate. Grade and line stakes shall be protected. No excavated material shall be placed on private property without the written consent of the property owner.
- B. Where materials unsuitable for backfill are excavated within the limits of excavation shown on the drawings, the unsuitable material shall be removed from the job site and disposed of by the Contractor at the Contractor's Expense. Suitable granular or sand backfill shall be provided to replace the unsuitable materials and worked into existing excavated soils where possible, at no additional cost to the Owner.

3.4 Trench Excavation

- A. All excavation for pipeline and utilities shall be open cut and tunneling will not be permitted unless specifically called for on the plans. Trench sides shall be approximately vertical between an elevation of one (1) foot above the top of the pipe and the centerline of the utility; otherwise, trench sides shall be as vertical as possible or as required. Trench may be excavated by machinery to a depth that will not disturb the finish grade.
- B. Excavate trenches to depth indicated or required for indicated flow lines and invert elevations.
- C. The Contractor shall excavate the trench by hand where excavation and machinery would endanger trees or structures which otherwise might be saved by the use of hand excavation.
- D. Dig trenches to the uniform width required for particular item to be installed, sufficiently wide to provide ample working room. Provide minimum 8-inch clearance on each side of pipe or conduit, for unsheeted or sheeted trench, with maximum width of trench measured at top of pipe, not to exceed the outside

diameter, plus 24 inches, and comply with all Local, State, and Federal Safety Standards and Regulations.

- E. For pipes or conduit 5 inches or less, excavate to indicated depths. Hand excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.
- F. Except as otherwise indicated, excavate for exterior water piping so top of piping is minimum 3 feet below finished grade under pavement and 30 inches minimum elsewhere.
- G. Backfill trenches with concrete where trench excavations pass within 18 inches of column or wall footings and which are carried below bottom of such footings, or which pass under wall footings.
- H. For pipes or conduit 6 inches or larger, tanks and other work indicated to receive subbase, excavate to subbase depth indicated, or if not otherwise indicated, to 6 inches below bottom of work to be supported.
- I. Except where a granular or concrete bedding is to be used, mechanical excavation shall be stopped above the final invert grade elevation and the remaining material carefully hand excavated so that the pipes may be laid on a firm, undisturbed, native earth bed.
- J. Bell holes shall be dug to permit the entire straight barrel of the pipes to rest on the trench bottom. Boulders or loose rocks which might bear against the pipe will not be permitted in the trench bottom or backfill.
- K. Excavated material consisting of muck, mud, clays or other unsuitable material shall not be stockpiled for backfill. Contractor shall remove such material from the site as it is excavated and shall dispose of it in an approved manner.
- L. Excavation in rock shall be made to at least six (6) inches below the finish grade of the utility and backfilled with a 6-inch layer of crushed stone or gravel prior to installation of pipe. Excavation in clayey soils shall be made to at least twelve (12) inches below the pipeline inverts and replace with compacted structural backfill.
- M. The Contractor shall be required to maintain uninterrupted utility service along the project but the methods used to accomplish this shall be left to his discretion, subject to approval of the authorities having jurisdiction. Puddling or discharge of sewage into open ditches will not be permitted. Existing piping damaged or removed to facilitate construction shall be replaced in kind, location and elevation.
- N. No more than 100 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the Owner. Pipe trenches across

roadways and driveways shall be backfilled as soon as pipe is installed. Where, in the opinion of the Owner, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than 24 hours. All open trenches shall be protected by the Contractor with barriers, warning devices and traffic control devices, which shall be kept in the correct position, properly directed and clearly visible at all times.

3.5 Trench Backfilling

- A. Backfilling operations are not to proceed until all necessary tests, inspections or observations have been performed as required by the applicable utility specification. The Contractor shall be responsible for obtaining the necessary inspections before, during and after backfilling, and shall re-excavate, refill, and perform all such related work to obtain satisfactory test results. All debris, rocks, broken concrete, formwork, etc., is to be removed from the trench prior to the start of backfilling operations. All backfill material is to be free of muck, rock, organic material, broken concrete or other debris. Backfill is to be placed in uniform six-inch (6-inch) layers, loose measure, and compacted the full width of the trench to not less than 98 percent of maximum dry density. This procedure is to be carried out for the full height of the utility plus one (1) foot above the utility. After the backfill has reached an elevation of one (1) foot above top of the utility, operations are to proceed as follows:
 - 1. Under the existing or proposed roads, paved areas, etc., backfill material is to be placed in uniform eight-inch (8-inch) layers, loose measure, and compacted to not less than 98 percent of maximum density for the full depth of the trench.
 - 2. In areas where no construction is to take place over the utility, backfill material is to be placed in uniform twelve-inch (12-inch) layers, loose measure, and compacted to a density not less than 95 percent of maximum density for the full depth of the trench.
- B. Backfill material is to be placed in the trench in such a manner so as not to disturb the alignment of the utility. Under no circumstances is a bulldozer or other equipment to be allowed to push fill material into the trench. The material is not to be dropped on the utility but placed in a manner as to allow the utility to remain in place and to allow for the uniform spreading and compaction of the material. Material is to be placed on both sides of the utility so that the backfill will have the same elevation on each side during compaction operations. Careful attention shall be observed to backfilling under pipe trenches or spacing lines such as plate compacting, “walking in “and/or hand tampering.

- C. Whenever trenches have not been properly filled, or if settlement occurs, they shall be refilled, smoothed off, and finally made to conform to the surface of the ground. Backfilling shall be carefully performed, and surface restored to the elevation shown on the plans. In unpaved areas, the surface of trenches shall conform and be equal in quality, character and materials to the surface immediately prior to making the excavation.
- D. Miscellaneous: Backfilling around meter boxes, valve boxes and other structures shall be accomplished in same manner as the connected pipe.

3.6 Excavation Below Normal Grade

- A. In the event the Contractor through error or carelessness excavates below the elevations required, the Contractor shall at his own expense backfill with granular backfill as hereinbefore specified and compact to obtain a suitable bedding.
- B. In the event unstable or unsuitable bedding material is encountered at or 12-inches below the limits of excavation noted on the drawings, such materials shall be removed and replaced with suitable compacted granular backfill material as hereinbefore specified.

3.7 Backfill Maintenance

The Contractor shall refill for settlement all backfilled areas. The surfaces of backfilled trenches shall be maintained in a safe and satisfactory condition at all times after being opened to traffic until the final acceptance of the contract work by the Owner.

3.8 Compaction Control

- A. Use mechanical soil compaction equipment suitable for the soils and area being worked and capable of obtaining the densities specified. Hydraulic jetting or flooding of soil, to obtain densification, will not be permitted.
- B. Maximum density and optimum moisture content refer to values determined by the standard test ASTM D 1557 (latest). Moisture content of backfill material, as it is being placed and compacted, shall be within +/- 2 percent of optimum moisture content.
- C. Testing
 - 1. The Contractor will retain a testing agency acceptable to the Owner. The testing agency retained by the Contractor will perform all required soils testing for the work. The cost of testing will be paid for by the Contractor, unless specified otherwise herein.

2. Field in-place density tests shall be performed in each 6-inch thick lift of compacted backfill and in the upper 12 inches below the bearing levels along the pipeline alignment. The density tests are necessary to verify that satisfactory compaction operations have been performed. Density testing shall be performed at one location for every 150 LF of trench excavations for every other lift of compacted fill. A minimum of one test between valves is required for every other lift regardless of the distance between valves. Backfill material which fails density tests shall be reworked and recompacted. Additional density tests for the reworked soils shall be at the Contractor's expense. Initial density tests for undisturbed in-place soils plus tests after first compaction, if required, will be paid for by the Contractor. Tests required for any additional compaction of the soil shall be at the Contractor's expense.
3. The Owner's Representative will judge soils to be suitable or unsuitable. If the Contractor does not agree with the judgment of the Owner's Representative, soil tests will be performed on the material in question. These tests shall be at the Contractor's expense when test results confirm the Owner's Representative's judgment.

3.9 Protective Sheeting

- A. The Contractor shall provide and maintain protective sheeting (including shoring and bracing) as may be required to retain soil, protect workers, protect existing facilities (structures, utilities, pavement, etc.) or confine the construction to a required area. It shall be the Contractor's responsibility to provide safe protective sheeting, when required, without being instructed to do so at no additional cost to the Owner. Detailed plans and calculations for protective sheeting shall be submitted to the Owner for review.
- B. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.
- C. All protective sheeting shall be removed by the Contractor. The removal shall be completed in a manner which will not disturb or damage the finished work or existing facilities. All backfill requirements shall be met.
- D. Steel drag shields or trench boxes may be used and shall be Steel Safety Shield as manufactured by Safety Shoring Shields, Inc., Efficiency Trench Box as manufactured by Efficiency Production, Inc; or equal. Voids left by the advancement of the shield shall be carefully backfilled and compacted in accordance with trench backfill requirements.

END OF SECTION

02221-8

CCUA Bid No. 18/19-A7
Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

TRENCHING, BACKFILLING, AND COMPACTING
April 2019

SECTION 02370

EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. The Contractor shall take every reasonable precaution throughout construction to prevent the erosion of soil and the sedimentation of streams, bays, storm systems, or other water impoundments, ground surfaces, or other property as required by federal, state, and local regulations.
- B. The Work specified in this Section consists of providing, maintaining and removing temporary erosion and sedimentation controls as necessary to protect the Work and prevent sedimentation from the Contractor's activities from entering water bodies or other property owner's sites outside the Construction limits.
- C. The Contractor shall provide protective covering for disturbed areas upon suspension or completion of land-disturbing activities. Permanent vegetation shall be established at the earliest practicable time. Temporary and permanent erosion-control measures shall be coordinated to ensure economical, effective, and continuous erosion and siltation control throughout the construction and post-construction period.

1.02 REQUIREMENTS

- A. The Contractor is responsible for providing effective temporary erosion and sediment control measures during Construction or until final controls become effective.
- B. The areas of unstabilized soil cover shall be minimized at all times to limit erosion and sedimentation.
- C. The escape of sediment from the work site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with land-disturbing activities. Erosion control measures will be maintained at all times. If implementation does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source by the contractor as needed until effective erosion and sediment control is achieved. The contractor, at his own expense, shall remove any siltation deposits and correct any erosion problems as directed by the Owner which results from his construction operations.

- D. The escape of sediment from the work site shall be prevented by the installation of erosion and sediment control measures and practices prior to or concurrent with land-disturbing activities.
- E. Erosion and sediment control measures shall be maintained at all times, if implementation does not provide for effective erosion and sedimentation control, additional erosion and sedimentation control measures shall be implemented to control or treat the erosion or treat the erosion or sediment source by the contractor as needed until effective erosion and sediment control is achieved.
- F. Should the Contractor pump water from excavations during construction, appropriate siltation preventative measures shall be taken before the pumped water is discharged into any stormwater conveyance, drainage ditch, canal, or waterway.
- G. The contractor shall prevent offsite tracking of material.

1.03 SUBMITTALS

- A. The Contractor shall submit shop drawings in accordance with these Contract Documents.
- B. The projects that disturb greater than one acre, the Contractor shall prepare and submit an Erosion and Sedimentation Control Plan (Stormwater Pollution Prevention Plan) for Owner review and acceptance. The Plan shall be in effect throughout the Construction duration.
- C. The projects that disturb greater than one acre, the Contractor shall submit copies of applicable permits, Notice of Intent, and Notice of Termination.

1.04 REFERENCE STANDARDS

- A. Reference standards and recommended practices referred to in this Specification Section shall be the latest revision of any such document in effect at the bid time. The following documents are a part of this Section. Where this Section differs from these documents, the requirements of this Section shall apply.

Florida Department of Transportation (FDOT)

FDOT Spec. Section 103 - Temporary Work Structures

FDOT Spec. Section 104 - Prevention, Control, and Abatement of Erosion and
Water Pollution

FDOT Spec. Section 530 - Revetment Systems

FDOT Spec. Section 982 - Fertilizer

FDOT Spec. Section 983 - Water for Grassing

FDOT Spec. Section 985 - Geosynthetic Materials

1.05 QUALITY ASSURANCE (NOT USED)

1.06 WARRANTIES

- A. Warranties shall be in accordance with these Contract Documents.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. The Contractor shall adhere to the requirements in these Contract Documents for Delivery, Storage, and Handling of the items specified in this Section.

1.08 QUALIFICATIONS (NOT USED)

1.09 REGULATORY REQUIREMENTS

- A. The Contractor shall be responsible for filing Notice of Intent (NOI) and Notice of Termination (NOT) for Construction Activities with regulatory agencies (SJRWMD, SFWMD, and FDEP) as required by law, if thresholds are expected to be exceeded.
- B. Erosion-control measures shall be performed conforming to the requirements of and in accordance with approved plans by applicable state and local agencies and as specified by the erosion-control notes included on the Drawings and as required by these Specifications.
- C. The Contractor shall comply with all local, State, and Federal agencies, laws, and rules.

1.10 PRACTICES

- A. The Contractor shall adhere to the following:
 - 1. Avoid dumping soil or sediment into any stream bed, pond, ditch, or watercourse.
 - 2. Maintain an undisturbed vegetative buffer where possible between a natural watercourse and trenching and grading operations.
 - 3. Avoid equipment crossings of streams, creeks, and ditches where practicable.
 - 4. The contractor shall furnish and install tree protection, erosion, and sediment control measures prior to any other construction activity and

shall maintain such appurtenances until permanent ground cover is established and all land-disturbing activities in the area have ceased.

1.11 EROSION AND SEDIMENT-CONTROL DEVICES AND FEATURES

- A. The Contractor shall construct all devices (silt fences, retention areas, etc.) for sediment control at the locations required to protect federal, state, and local water bodies and water courses and drainage systems before beginning to excavate the site. All devices shall be properly maintained in place until a structure or paving makes the device unnecessary or until directed to permanently remove the device.
- B. The Contractor shall use mulch to temporarily stabilize areas subject to excessive erosion and to protect seed beds after planting where required.
- C. Filter fabric, synthetic bales, or other approved methods shall be placed and secured over the grates of each existing inlet, grating or storm pipe opening near the area of excavation to prevent silt and debris from entering the storm systems.
- D. The Contractor shall use silt fences, synthetic bales and floating turbidity barriers as shown on the plans or as directed by the Owner or Owner's Representative to restrict movement of sediment from the site.
- E. The Contractor shall establish vegetative cover on all unpaved areas disturbed by the work.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Open-mesh biodegradable mulching cloth.
- B. Fertilizer shall be slow release 10-10-10 grade or equivalent.
- C. Lime shall be Dolomitic Agricultural Ground limestone, in accordance with FDOT Section 982.
- D. Grass shall be in accordance with Section 02936, Grassing, Seeding and Sodding.
- E. Silt fence shall consist of non-biodegradable filter fabric (Trevira, Mirafi, etc.), in accordance with FDOT Section 985, wired to galvanized wire mesh fencing and supported by wood or metal posts.
- F. Floating or staked turbidity barriers as specified in FDOT Spec. Section 985 and FDOT Standard Index 103.
- G. Erosion Stone: FDOT Section 530
 - 1. Sand-Cement Riprap

2. Concrete Block
 3. Rubble 20 to 300 pounds each
- H. Filter Fabric for placing under Riprap shall meet the requirements of FDOT Section 985.
- I. Synthetic bales in accordance with FDOT Section 104.

PART 3 - EXECUTION

3.01 CLEARING

- A. The Contractor shall schedule and perform clearing and grubbing so that subsequent erosion-control practices can follow immediately. Excavation, borrow, and embankment operations will be conducted as a continuous operation. All construction areas not otherwise protected shall be stabilized within 14 days and planted with permanent vegetative cover within 30 working days after completing active construction.

3.02 STABILIZING

- A. The angle for graded slopes and fills shall be no greater than the angle that can be retained by vegetative cover or other adequate erosion-control devices or structures. All disturbed areas outside of embankment left exposed will, within 14 days of completion of any phase of grading, be planted or otherwise provided with either temporary or permanent ground cover, devices, or structures sufficient to restrain erosion.

3.03 REQUIREMENTS

- A. Install and maintain silt fences, dams, traps, barriers, and appurtenances as shown on the drawings. Replace deteriorated hay bales, silt fence, and dislodged filter stone. Repair portions of any devices damaged at no additional expense to the Owner.
- B. Install all sediment control devices in a timely manner to ensure the control of sediment. At sites where exposure to sensitive areas is likely, complete installation of additional sediment control devices before starting earthwork.
- C. Use approved temporary erosion control features to correct conditions that develop during Construction that were not foreseen when the initial Erosion and Sedimentation Control Plan was first developed.
- D. Whenever land-disturbing activity is undertaken on a tract, a ground cover sufficient to restrain erosion must be planted or otherwise provided within

30 calendar days on that portion of the tract upon which further active construction is to be undertaken.

- E. If any earthwork is to be suspended for any reason for longer than 14 calendar days, the areas involved shall be seeded with vegetative cover or otherwise protected against excessive erosion during the suspension period. Suspension of work in any area of operation does not relieve the Contractor of the responsibility to control erosion in that area.
- F. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results that comply with the requirements of the Regulatory agency having jurisdiction or the Owner, the Contractor shall immediately take whatever steps necessary to correct the deficiency at its own expense to protect the Work and any adjacent property to the site, as well as to prevent contamination of any stormwater conveyance, river, stream, lake, tidal waters, reservoir, canal, IMS4, or other water impoundments.
- G. The side slope areas with unstabilized or unprotected soil cover shall be minimized at all times to limit erosion and sedimentation.
- H. Incorporate permanent erosion control features into the Project at the earliest practical time.

3.04 VEGETATIVE COVER

- A. Preparation of Seedbed. Areas to be seeded shall be scarified a depth of 4 inches until a firm, well-pulverized, uniform seedbed is prepared. Fertilizer shall be applied during the scarification process in accordance with the following rates:

Fertilizer—per manufacturer's recommended rate.
- B. Seeding. Disturbed areas along embankments shall be permanently seeded with mix specified in Section 02936, Grassing, Seeding, and Sodding.
- C. The Contractor shall mulch all areas immediately after seeding. Mulch shall be applied and anchored as specified in Section 02936, Grassing, Seeding, and Sodding.

3.05 MAINTENANCE

- A. The Contractor shall maintain all temporary and permanent erosion-control measures in functioning order. Temporary structures shall be maintained until such time as vegetation is firmly established and grassed areas shall be maintained until completion of the project. Areas which fail to show a suitable stand of grass or which are damaged by erosion shall be immediately repaired. No additional payment will be made to the Contractor for re-establishing erosion-control

devices, which may become damaged, destroyed, or otherwise rendered unsuitable for their intended function during the construction of the project.

- B. The Contractor shall remove all silt, sediment, and debris buildup regularly to maintain functioning storm systems and erosion-control devices.

3.06 REMOVAL OF SEDIMENT CONTROL DEVICES

- A. Near completion of the project and/or in accordance with the Erosion and Sedimentation Control Plan (Stormwater Pollution Prevention Plan) and the Notice of Intent for Construction Activities filed with regulatory agencies, as acceptable to the Owner, the Contractor shall dismantle and remove the temporary devices used for sediment control during construction. All erosion-control devices in seeded areas shall be left in place until the grass is established. The Contractor shall seed areas around devices and mulch after removing or filling temporary control devices.
- B. The Contractor shall clean up all areas at the completion of the project.

END OF SECTION

SECTION 02750

REMOVING AND REPLACING PAVEMENT

PART 1 - GENERAL

1.1 Scope

- A. The work to be performed under this Section shall consist of removing and replacing existing pavement, sidewalks and curbs in paved areas where such have been removed for construction of sewer and utility appurtenances and structures.
- B. All paved street or other paved areas cut by these operations shall be repaired and repaved in a workmanlike manner as shown or specified. All work shall be in accordance with Florida State Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, unless noted otherwise herein or on the Plans.
- C. Owner shall obtain and the Contractor shall perform and comply with the requirements or Rights-of-Way all work-related activities in accordance with the requirements of the Authority's FDOT and /or Clay County Use Permits for this project where applicable.

1.2 References

A. ASTM International

- 1. ASTM A 185 – Welded Steel Wire Fabric for Concrete Reinforcement.
- 2. ASTM A 615 – Deformed and Plain Billet Steel Bars for Concrete Reinforcement,
- 3. Grade 60.
- 4. ASTM C 33 – Concrete Aggregate.
- 5. ASTM C 94 – Ready-Mixed Concrete.
- 6. ASTM C 143 – Slump of Hydraulic Cement Concrete.
- 7. ASTM C 150 – Portland Cement.
- 8. ASTM C 171 – Sheet Materials for Curing Concrete.
- 9. ASTM C 171 – Sampling Freshly Mixed Concrete.
- 10. ASTM C 173 – Air Content of Freshly Mixed Concrete by the Volumetric Method.
- 11. ASTM C 309 – Liquid Membrane-Forming Compounds for Curing Concrete.
- 12. ASTM D 422 – Particle-Size Analysis of Soils.
- 13. ASTM D 1752 – Preformed Sponge Rubber and Cork Expansion Joint Filler for Concrete Paving and Structural Construction.

B. State of Florida, Department of Transportation (FDOT): standard Specifications for

Road and Bridge Construction, Latest Edition.

1. The provision therein for method of measurement and payment do not apply.
2. References to “Engineer” and “State” shall be interpreted to mean “Authority’s designated representative.”

- C. Specified references, or cited portions thereof, current at date of bidding documents unless otherwise specified, govern the work.

1.3 Quality Assurance

- A. Except as modified herein or as indicated, work and materials shall be performed and furnished in accordance with the FDOT Standard Specifications for Road and Bridge Construction, Latest Edition.
- B. Obtain all materials from respective same source throughout construction operations.
- C. Coordinate density testing of subbase, base course & compression strength testing of concrete with testing laboratory employed and paid for at the contractor’s expense.

1.4 Submittals

Provide certificates stating that materials supplied comply with Specifications. Certificates shall be signed by the material producer and the Contractor.

1.5 Conditions

A. Weather Limitations

1. Do not conduct paving operations when surface is wet or contains excess of moisture which would prevent uniform distribution and required penetration.
2. Construct prime and tack coats, and asphaltic courses only when atmospheric temperature in the shade is above 50 degrees F, when the underlying base is dry and when weather is not rainy.
3. Place base course when air temperature is above 35 degrees F and rising.

- B. Grade Control: Establish and maintain the required lines and grades for each course during construction operations

PART 2 - PRODUCT

2.1 Materials and Construction

02750-2

- A. All material shall conform to the applicable sections of the Florida Department of Transportation (FDOT) Standard Specification for Road and Bridge Construction (latest edition).
- B. Special Surfaces: Where driveways or roadways are disturbed or damaged which are constructed of specialty type surfaces, e.g., brick or stone, these driveways and roadways shall be restored utilizing similar, if not original, materials. Where the nature of these surfaces dictates, a specialty Contractor shall be used to restore the surfaces to their previous or better condition. Special surfaces shall be removed and replaced to the limits to which they were disturbed.

PART 3 - EXECUTION

3.1 Removing Pavement

- A. Remove existing pavement as necessary for installing the pipe line, lateral, and/or cleanout and appurtenances.
- B. In areas where pavement will be removed or overlaid, the Contractor shall locate existing valves, and manholes, and shall document the location. The documentation shall include two measurements from the valve or manhole to permanent object such as a tree, fire hydrant, house corner or similar. It is the intent to provide a means to locate the valves and manholes so that they can be located and brought to grade following paving.
- C. Prior to excavation in paved streets or other paved areas, the pavement shall be cut along straight and perpendicular lines. Just prior to repaving, jagged edges shall be squared and cut to a string line so that the patch will present a neat appearance.
- D. Centerline stripes or other pavement markings which existed prior to the start of construction shall be replaced. No separate payment will be made for stripping or marking unless shown.
- E. The paved surface of the replacement shall be finished flush with the existing pavement and shall conform to the existing street contour.
- F. Damage to Adjacent Pavement: Do not disturb or damage the adjacent pavement. If the adjacent pavement is disturbed or damaged, remove and replace the damaged pavement.
- G. Damage to Traffic Signal Loops: Any pavement removal which will include removal of traffic signal loops embedded in the pavement shall be coordinated with the Traffic Engineering Department having jurisdiction over the traffic signal five days prior to pavement removal.
- H. Sidewalk: Remove and replace any sidewalks disturbed by construction for their full width and to the nearest undisturbed joint.
- I. Curbs: Tunnel under or remove and replace any curb disturbed by construction to the nearest

undisturbed joint.

- J. Pavers: Remove pavers so that they remain intact. Store safely to avoid damage.

3.1 Replacing Pavement

- A. Pavement shall be replaced as soon as practical after all testing is completed and underground construction is approved. In no case shall an area remain unpaved for more than 14 days after the original surface was removed. Should completion of testing and approval preclude final paving within 30 days, temporary asphaltic concrete patching shall be installed and maintained until pavement can be replaced in accordance with the standard detail drawing.
- B. During backfilling and compaction of the backfill, arrange to have the subgrade material verified and tested. The subgrade shall meet the requirements for Type B stabilization.
- C. Temporary trench backfill along streets and driveways shall include 8-inches of lime rock base, crushed stone, crushed concrete as a temporary surfacing of the trenches, or asphalt as directed by the County of FDOT. This temporary surface shall be maintained carefully at grade and dust-free by the Contractor until the pavement is replaced. All temporary surfacing not meeting the requirements for the pavement (including base) shall be removed.
- D. Replace driveways, sidewalks and curbs with the same material as existing, to nearest existing undisturbed construction joint and to the same dimensions as those existing.
- E. Where the paved surface is to be replaced, the temporary surface and backfill material shall be removed to the depth and width as required to replace the pavement in accordance with the Authority having jurisdiction. All edges of the existing pavement shall be cut to a straight, vertical edge. Care shall be used to get a smooth joint between the old and new pavement and to produce an even surface on the completed street. Concrete base slabs and crushed stone bases, if required, shall be placed and allowed to cure for three days before bituminous concrete surface courses are applied. Expansion joints, where applicable, shall be replaced in a manner equal to the original joint.
- F. Pavement Resurfacing (asphalt overlay)
 - 1. Certain areas to be resurfaced may be specified or noted on the Drawings.
 - 2. Where pavement to be resurfaced has been damaged with potholes, the Contractor shall remove all existing loose pavement material and backfill with compacted Bituminous Plant Mix Base, as specified, to the level of the existing pavement. After all pipe line installations are complete and existing pavement has been removed and replaced along the trench route, apply tack coat and surface course as specified.
- G. Resurfacing limits shall be perpendicular to the road centerline. The limits of resurfacing shall be

10 feet beyond the edge of the pavement replacement on the main road being resurfaced, and to the point of tangency of the pavement on the side streets.

- H. Pavement Striping: Pavement striping removed or paved over shall be replaced with the same type, dimension and material as original unless directed otherwise by the County or FDOT.
- I. Traffic Signal Loops: The replacement or repair of all traffic signal loops removed or damaged during the removal and replacement of pavement shall be coordinated by the Contractor with the Traffic Engineering Department having jurisdiction over each traffic signal. The Contractor shall be responsible for payment of all fees associated with replacement or repair of traffic signal loops.

3.2 Sidewalk and Curb Replacement

A. Construction

1. All concrete sidewalks and curbs shall be replaced in accordance with the FDOT standard specifications for Road and Bridge Construction, unless modified herein.
 2. Forms for sidewalks shall be of wood or metal, shall be straight and free from warp, and shall be of sufficient strength, when in place, to hold the concrete true to line and grade without springing or distorting.
 3. Forms for curbs shall be metal and of an approved section. They shall be straight and free from distortions, showing no vertical variation greater than 1/8-inch in 10 feet and no lateral variation greater than 1/4-inch in 10 feet from the true plain surface on the vertical face of the form. Forms shall be of the full depth of the structure and constructed such to permit the inside forms to be securely fastened to the outside forms.
 4. Securely hold forms in place true to the lines and grades to match existing.
 5. Wood forms may be used on sharp turns and for special sections, as approved by the County or FDOT. Where wooden forms are used, they shall be free from warp and shall be the nominal depth of the structure.
 6. All mortar and dirt shall be removed from forms and all forms shall be thoroughly wetted before any concrete is deposited.
- B. When a section is removed, the existing sidewalk or curb shall be cut to a neat line, perpendicular to both the centerline and the surface of the concrete slab. Existing concrete shall be cut along the nearest existing construction joints; if such joints do not exist, the cut shall be made at minimum distances to match existing.
- C. Existing concrete sidewalks and curbs that have been cut and removed for construction purposes

shall be replaced with the same width and surface as the portion removed. Sidewalks shall have a minimum uniform thickness of 4-inches. The new work shall be neatly jointed to the existing concrete so that the surface of the new work shall form an even, unbroken plane with the existing surfaces.

- D. The subgrade shall be at a depth equal to the thickness of the concrete, plus two inches. Subgrade shall be of such width as to permit the proper installation and bracing of the forms. Subgrades shall be compacted by hand tamping or rolling. Soft, yielding or unstable material shall be removed and backfilled with satisfactory material.

E. Joint for Curbs

1. Joints shall be constructed to match existing or as specified. Construct joints true to line with their faces perpendicular to the surface of the structure and within 1/4-inch of their designated position.
 2. Thoroughly spade and compact the concrete at the faces of all joints filling all voids.
 3. Install expansion joint materials at the point of curve at all street returns.
 4. Install expansion joint material behind the curb at abutment to sidewalks and adjacent structures.
 5. Place contraction joints every 10 feet along the length of the curbs and gutters. Form contraction joints using steel templates or division plates which conform to the cross section of the structure. Leave the templates in place until the concrete has set sufficiently to hold its shape but remove them while the forms are still in place. Contraction joint templates or plates shall not extend below the top of the steel reinforcement or they shall be notched to permit the reinforcement to be continuous through the joint. Contraction joints shall be a minimum of 1-1/2-inches deep.
- F. Expansion joints shall be required to replace any removed expansion joints. Expansion joints shall be true and even, shall present a satisfactory appearance, and shall extend to within 1/2-inch of the top of finished concrete surface.

G. Finishing

1. Strike off the surface with a template and finish the surface with a wood float using heavy pressure, after which, contraction joints shall be made and the surface finished with a wood float or steel trowel.
2. Finish the face of the curbs at the top and bottom with an approved finishing tool of the radius to match existing.
3. Finish edges with an approved finishing tool having a 1/4-inch radius.
4. Provide a final broom finish by lightly combing with a stiff broom after troweling is

complete.

5. The finished surface shall not vary more than 1/8-inch in 10 feet from the established grade.

H. Driveway and Sidewalk Ramp Openings

1. Provide driveway openings of the widths and at the locations to match existing and as directed by the Authority.
 2. Provide sidewalk ramp openings to match existing, in conformance with the applicable regulations and as directed by the Authority.
- I. Concrete shall be suitably protected from freezing and excessive heat. It shall be kept covered with burlap or other suitable material and kept wet until cured. Provide necessary barricades to protect the work. All damage caused by people, vehicles, animals, rain, the Contractor's operations and the like shall be repaired by the Contractor, at no additional expense to the Authority.
- J. Paver Installation – Reinstall pavers to their original position.

K. Maintenance

The Contractor shall maintain the surfaces of roadways built and pavements replaced until the acceptance of the Project. Maintenance shall include replacement, scraping, reshaping, wetting and rerolling as necessary to prevent raveling of the road material, the preservation of reasonably smooth surfaces and the repair of damaged or unsatisfactory surfaces, to the satisfaction of the Authority. Maintenance shall include sprinkling as may be necessary to abate dust from the gravel surfaces.

L. Supervision and Approval

1. Pavement restoration shall meet the requirements of the agency responsible for the pavement. Obtain agency approval of pavement restorations before requesting final payment.
2. Obtain the County's or FDOT's approval for restoration of pavement.
3. Failure of Pavement: Should any pavement restoration or repairs fail or settle during the life of the Contract, including the bonded and warranty periods, promptly restore or repair defects.

4. If replacement of the asphalt surface is required to repair defect, the entire lane shall be replaced for a distance that extends 10 feet beyond the limits of the defected area.

M. Cleaning

The Contractor shall remove all surplus excavation materials and debris from the street surfaces and rights-of-way and shall restore street, roadway or sidewalk surfacing to its original condition. Surplus material and debris shall be disposed of by the Contractor at an off-site location in accordance with the local, State and Federal Agency requirements.

END OF SECTION

SECTION 02766

RELINING UNDERGROUND PIPELINES

PART I – GENERAL

A. DESCRIPTION

This section provides for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is tightly formed to the original conduit. The resin is cured using either hot water under hydrostatic pressure or steam pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting. This specification describes CIPP relining for 8-inch to 24-inch diameter piping. CIPP rehabilitation of service laterals lining is described in Section 02767 Sanitary Sewer Service Lateral Rehabilitation.

B. SCOPE OF WORK:

The contractor shall provide all labor, supervision, materials, equipment and incidentals required for the rehabilitation of various sized sanitary sewer gravity mains with resin impregnated cured-in-place pipe (CIPP) in accordance with all applicable Owner and industry standards. Work assigned under this contract may include, but is not limited to, the following activities:

- Sanitary sewer cleaning
- Sanitary sewer pre- and post- work inspections
- Easement access
- Maintenance of Traffic (MOT)
- Isolation and by-pass pumping
- Cured-In-Place Pipe reconstruction
- Chemical and physical product testing
- Hydraulic capacity testing
- Reinstatement of services and pressure grouting
- Site restoration.

C. EQUIPMENT/VEHICLES

All contractor/subcontractor equipment shall be sufficient in size and number for work to be done in a timely manner under this contract. All contractor/subcontractor equipment shall be maintained in good operating condition. The Owner reserves the right to reject any equipment it deems unsafe or insufficient in size and/or number to perform work under this contract. It shall be the sole responsibility of the contractor/subcontractor to replace rejected equipment in a timely manner and at no cost to the Owner.

D. REFERENCED DOCUMENTS

This specification references the following standards from the American Society for Testing and Materials which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern:

- ASTM F1216 Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- ASTM F1743 Rehabilitation of Existing Pipelines by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
- ASTM D5813 Cured-in-Place Thermosetting Resin Sewer Pipe
- ASTM D790 Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D2990 Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics.

D. REQUIREMENTS:

1. The Contractor shall be certified in confined space entry and traffic control per OSHA requirements.
2. Cleaning of Sewer Lines: The contractor shall remove and properly dispose of all internal debris from the inside of sewer lines that will interfere with the installation of CIPP.
3. Bypassing Sewage: The contractor shall provide for the flow of sewage around the sections of pipe designated for reconstruction. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole by way of restrained watertight pipe. The pump(s) and bypass lines shall be of adequate capacity and size to handle the average daily flow. Backup bypass pump(s) of adequate size and capabilities shall be on site at all times of by-pass pumping.
4. TV and Inspection of Pipelines: Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines and it shall be noted that these conditions can be corrected. A video and suitable log shall be kept for later reference by the Owner. All video inspection shall be witnessed by an Owner representative as it is being performed.
5. Manhole/Liner Interface: It shall be the responsibility of the contractor to make a watertight seal at the interface where the liner/host pipe meets the manhole.
6. Service Reconnection: Service reconnection refers to the reinstatement of the customer service connection of the sewer main after the installation of Trenchless Pipe Reconnection System. This is accomplished from within the sewer main via a remote-controlled cutting device. The service reconnection will not be considered by

- the Owner to be complete until it is polished.
7. Service with Pressure Grouting: Service wye to be pressure grouted after mainline has been rehabilitated and service line re-instated. A non-shrinking chemical grout is to be used (Avanti 118/101 or Cues Quickseal 105 are acceptable). The contractor shall provide trenchless reconstruction of service lateral and main line sewers. The contractor shall have the capability of performing services which include televised inspection, data collection, system flow analysis and pipeline reconstruction.
 8. The contractor shall provide services that include safety measures for both the public and workers shall coordinate all scheduling with the Owner.
 9. The contractor shall be completely responsible for the control of the environment of the work site during on-site operations. All precautions shall be taken by the selected contractor to protect the workers, public and Owner staff from the exposure to harmful or hazardous substances within the sewer system.
 10. The contractor shall be responsible for all traffic control during operation and bypass pumping. Because the Owner's sewer are located in rights of way owned and maintained by various agencies, the maintenance of traffic shall be as required by these various agencies, including but not limited to, the Florida Department of Transportation, Clay County and the Town of Orange Park. The Contractor shall be responsible for ensuring the MOT plan meets with these agencies approval.
 11. The contractor shall be responsible for the disposal of all waste materials and shall transport waste materials to CCUA's Miller Street Wastewater Treatment Plant located at 1601 Bartlett Avenue, Orange Park, FL 32073 for processing. Owner shall approve all waste materials disposal schedules. The selected contractor shall be responsible for all waste material spills and clean-up in the loading, hauling and unloading of the contractor's equipment.
 12. The contractor shall be responsible for all costs associated with cure water disposal.
 13. The contractor shall be responsible for properly installing an approved backflow prevention device inline to the freshwater fill line of all jetting and/or vacuum equipment.
 14. The contractor shall be responsible for conforming to any and all requirements regarding hauling and disposal of wastes from each work site in accordance with OSHA regulations and those that may be mandated by federal, state or local governments.
 15. The contractor shall ensure that all waste material transporters possess all required federal, state and local regulations, including but without limitation, 40 CFR Part 263, "Standards Applicable to Transporters of Hazardous Waste" and Chapter 17-730, Part 3, Florida Administrative Code, and may be amended from time to time.
 16. The contractor shall inform the Owner of its planned work schedules and shall afford the Owner reasonable opportunity to observe and inspect the contractor's work in process. The Owner will be advised of all schedule changes and notified when a work site is left for a 24-hour period when work is not complete.
 17. The contractor shall be responsible for obtaining potable water from the Owner for use on the project. A construction meter must be obtained from the Owner prior to the start of work. The Owner will not charge for the meter use of the water. If the meter is

not promptly returned upon completion of a project, the Owner will retain money from the project to cover the cost of meter replacement.

E. LICENSES/PERMITS:

It shall be the responsibility of the Contractor to obtain all necessary municipal and other governmental licenses/permits and approvals or consent from utilities or carriers such as the telephone company, power company, and/or other persons/organizations upon whose property or authority performance of work under the contract might impinge.

PART II – PRODUCTS

A. MATERIALS

1. Tube – the sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5.1 or ASTM F1763, Section 5.2.1 or ASTM D 5813, Section 5 and 6. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
 - a) The wet out Tube shall have a relatively uniform thickness that when compressed at installation pressures will equal or exceed the calculated minimum design CIPP wall thickness.
 - b) The Tube shall be manufactured to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during installation.
 - c) The outside layer of the Tube shall be coated with an impermeable, flexible membrane that will contain the resin and allow the resin impregnation (wet out) procedure to be monitored.
 - d) The Tube shall contain no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.
 - e) The wall color of the interior pipe surface of CIPP after installation shall be a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.
 - f) Seams in the Tube shall be stronger than the non-seamed felt material.
2. Resin – The resin system shall be a corrosion resistant polyester or vinyl ester system

including all required catalysts, initiators that when within the tube create a composite that satisfies the requirements of ASTM F1216, ASTM D5813 and ASTM F1743, the physical properties herein, and those which are to be utilized in the submitted and approved design of the CIPP for this project. The resin shall produce a CIPP that will comply with the structural and chemical resistance requirements of this specification.

B. STRUCTURAL REQUIREMENTS

1. The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall.
2. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If the layers separate during field sample testing, new samples will be required to be obtained from the installed pipe. Any reoccurrence may cause rejection of the work.
3. The cured pipe material (CIPP) shall conform to the structural properties as listed below.

MINIMUM CIPP PHYSICAL PROPERTIES			
Property	Test Method	Cured Polyester Composite	
		Min. per ASTM F1216	Enhanced Resin
Modulus of Elasticity	ASTM D790	250,000 psi	400,000 psi
Flexural Stress	ASTM D790	4,500 psi	4,500 psi

C. PRODUCT PERFORMANCE

Standard lining products are intended to have a 50-year design life and in order to minimize Owner's risk, only proven products with substantial successful long-term track records will be approved. Proposed products must meet or exceed ALL of the following criteria to be deemed commercially acceptable.

For a *product* to be considered commercially proven, a minimum of 2,000,000 linear feet of successful sanitary sewer system installations in the United States within 5 years must be documented to the satisfaction of the Owner to assure commercial viability. In addition, at least 500,000 linear feet of 8" through 24" of the product shall have been in successful service within the State of Florida for a minimum of five (5) years.

D. INSTALLER QUALIFICATIONS

For an *installer* to be considered commercially proven, the installer must satisfy all insurance, financial and bonding requirements of the Owner, and must have had at least five (5) years active experience under the firm's current corporate name in the commercial installation of the proposed product. In addition, the installer must have

successfully installed at least 1,000,000 linear feet within 24 months of the proposed product in sanitary sewer systems.

E. CLEANING CONTRACTOR QUALIFICATIONS

Cleaning operations shall be conducted by experienced personnel who have previously been engaged in cleaning operations of similar size and complexity to the work described herein. A contractor conducting cleaning operations on existing sewer lines shall have five (5) years experience in cleaning existing sewer lines using the equipment specified herein and shall have successfully completed projects containing a total of at least 200,000 linear feet within the past two (2) years.

PART III – EXECUTION

A. SANITARY SEWER CLEANING

- a. Scope: Work performed under this section includes removal and disposal of all dirt, roots, grease, solids, or semi-solids from sanitary sewer mains and manholes as indicated on the drawings and as specified herein to the extent that video inspection, flow isolation, and manhole inspection can be performed.
- b. Submittals:
 1. The contractor shall submit a Cleaning Log Sheet for the purposes of recording pertinent information relative to the sanitary sewer structures being cleaned.
 2. Material Safety Data Sheets (MSDS) submittals shall be made for all chemical cleaning agent proposed for use under this contract.
- c. Equipment: The equipment selected for cleaning shall be capable of removing all accumulated dirt, sand, grease, rocks and other deleterious materials and obstruction from the sewer lines. All equipment used for cleaning operations shall be designed and intended to do the type of work which is specified. When at all possible, the equipment shall be a self-contained unit to handle all operations. The equipment used shall be the product of a manufacturer actively engaged in the research, development and manufacturing of said equipment. Any violations of these specifications may be grounds of removal of the equipment and replacement with equipment meeting these specifications, at no additional cost to the Owner.
 1. High Velocity Cleaning Equipment: All high velocity hydraulic sewer cleaning equipment shall be truck mounted. The equipment shall have a minimum of 500 feet of $\frac{3}{4}$ inch I.D. high pressure hose with a selection of two or more high velocity nozzles. The nozzles shall have a capacity of 50 GPM at a minimum

working pressure of 1000 psi. The nozzles shall be capable of producing a scouring action from 15° to 45° in the direction of cleaning and perpendicular to the sewer axis in all size lines designated to be cleaned. Equipment shall also include a high velocity gun for washing and scouring manhole walls and floor. The gun capacity shall equal 3.5 to 27 GPM at between 200 and 800 psi. The gun shall be capable of producing flows from a fine spray to a long distance solid stream. The equipment shall carry its own 1200 gallon (minimum) water tank capable of holding corrosive or caustic cleaning, sanitizing or degreasing chemicals if required by the Owner, auxiliary engines and pumps, and hydraulically driving hose reel. All controls shall be located so that the equipment can be operated aboveground.

2. Hydraulically Propelled Cleaning Equipment: Hydraulically propelled cleaning equipment used shall be a movable dam type and be constructed in such a way that a portion of the dam may be collapsed instantly will not be considered as acceptable cleaning equipment. The movable dam shall be of equal diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to insure total removal of the grease or obstruction.
3. Mechanical Cleaning Equipment: Bucket machines shall be in pairs with each machine powered by a minimum of a 16 horsepower engine to insure sufficient pulling power. Each machine shall be equipped with a two speed transmission and shall be able to pull at rates of 175 feet per minute in high speed. The belt clutch gear reduction shall be a combination of approximately 83 to 1 reduction in low speed and 55 to 1 in high speed. The power rodding machine shall be of a “continuous rod” type capable of holding a minimum of 750 feet of rod. The machine and rod shall be specially treated steel, designed for the purpose intended. The machine shall have a positive rod drive and produce a 2,000 pound rod pull. To insure safe operation, the machine shall have a fully enclosed body and an automatic safety throw-out clutch or relief valve. The final pass shall be with a brush large enough to assure that the line has been cleaned sufficiently. This brush shall be mechanically driven, with the power mechanism properly sized. All electrical drops required by the contractor shall be arranged by the contractor. Lumberjack cutters, chain cutters/knockers, and porcupine cleaners shall be allowed when operated in accordance with manufacturer recommendations.
4. Capture and Removal of Debris: The contractor shall furnish equipment standard in the industry for the purpose of preventing debris from being washed past the manhole downstream of the line segment being cleaned, and for removing the debris from the manhole.
5. Water Requirements: The Owner shall provide access to water via fire hydrants for cleaning, inversion and other work items requiring water. It shall be the

Contractor's responsibility to obtain the proper meter from the owner. All water used for any function of the work shall be metered. The Owner will not charge for the use of potable water but will retain money from the project to repair damaged meters or replace the meter if it is not promptly returned upon completion of the work. Only potable water shall be used for this work.

d. Execution:

1. General: It is the intent of these specifications to provide a basis by which a sanitary sewer line can be cleaned of all debris so that further work can be carried out. The designated sanitary sewer lines shall be cleaned using high velocity, hydraulically propelled or mechanically powered sewer cleaning equipment as specified. Selection of the equipment used shall be based on the conditions of the lines at the time the work commences. The equipment and methods selected shall be satisfactory to the Owner. Cleaning of sewer lines shall be accomplished by trapping and collecting all sand, debris, grease and other materials, at the next manhole downstream of the line being cleaned and removal and proper disposal of said materials. The cleaning operations may also provide a means by which the sewer line can be threaded, i.e., a cable inserted in the line so that the television camera may be pulled through. Once a section of pipe has been televised and accepted as complete, no cleaning may occur to sections upstream.
2. Site Visit: The contractor shall be responsible for conducting a physical reconnaissance of the area to be cleaned in order to verify the location of known and /or accepted manholes.

The contractor shall utilize magnetic locator to attempt to identify the location of buried manhole cover and notify the Owner representative so that Owner personnel can excavate it and bring it up to grade prior to cleaning. Under no circumstances shall the contractor excavate buried manholes without prior contractual authorization from the Owner.

e. Hydraulic Cleaning Methodology:

1. High Velocity Cleaning Methodology: High velocity hydro-cleaning shall consist of cleaning and flushing of the sewer line by means of water pumped into the line at a high velocity. This shall be accomplished using approved equipment to deliver water to a self-propelled nozzle to do the necessary cleaning and flushing. As many passes as necessary shall be made to sufficiently clean the sewer line. Satisfactory precautions shall be taken to protect the sewer line from damage that might be inflicted by the improper use of cleaning equipment.
2. Hydraulically Propelled Methodology: Whenever hydraulically propelled cleaning tools, which depend on water pressure to provide their cleaning force, or any tools

which retard the flow of water in the sewer line are used, precautions shall be taken to insure that the water does not cause damage or flooding to the public or private property being served by the manhole section involved.

3. Capture and Removal of Debris: When hydraulic cleaning equipment is used, a suitable weir or dam shall be construed in the downstream manhole in such a manner that both the solids and water shall be trapped. This trapped solution shall then be pumped, using a method approved by the Owner, from the manhole into a retention chamber above ground. The retention chamber shall contain not less than two baffles to insure complete settlement of the solids before returning the liquid to the sewer line.

f. Mechanical Cleaning Methodology:

1. Rodding: Cleaning shall be with a power-driven continuous steel rod of sufficient length and gauge with the proper cleaning heads or augers, so as to loosen all solids or other materials. It shall also provide a means to thread a cable for the power winch. Lumberjack cutters, chain cutters/knockers, and porcupine cleaners may be used, when appropriate, for pipe cleaning.
2. Bucket Machine: Removal of all solids, materials and other debris shall be by means of a clam-shell type bucket and/or other appliances dragged through the sewer line with power winches of suitable size and horsepower.
3. Supplemental Cleaning: After all material has been removed by mechanical cleaning, a minimum of one pass using hydraulic cleaning methods shall be performed to insure complete removal of material from the walls of the pipe. Any damage to pipes will be repaired.
4. Capture and Removal of Debris: When mechanical cleaning equipment is used, debris captured in the downstream manhole shall be removed in a manner approved by the Owner, or as described above.

- g. Special Cleaning Requirements for Cast Iron Pipe: After cleaning pipe of normal sewage deposits such as sand and grease by methods above, the pipe shall be cleansed of tuberculation, including rust buildup and mineral deposits. Acceptable methods include lumberjack cutters, chain cutters/knockers, and porcupine cleaners. For pipe diameters greater than 24-inch, the contractor may choose any equipment necessary to remove the tuberculation, such as a "pig" or rodder; however, no equipment shall be used which may damage the pipe, manholes, street or downstream pump station. Where practical, the line shall be proofed by pulling a slip lining pulling head for the size of the pipe involved through the pipe to insure that no restrictions remain. The Contractor may choose a similar proofing device acceptable to CCUA.

- h. Sanitary Sewer Manhole Modifications: Any modifications to manholes to facilitate cleaning shall be the contractor's responsibility and shall be subject to acceptance of the Owner. Contractor shall salvage and reuse all manhole covers and rings that are removed

during sewer line and manhole rehabilitation.

i. Material Removal and Cleanup:

1. Material Removal: All sludge, dirt, sand, rocks, grease and other solid or semi-solid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing material from manhole section to manhole section will not be permitted. Under no circumstances will the contractor be allowed to accumulate debris, sand, etc., on the site of work beyond the time limit acceptable to the Owner, except in totally enclosed container, and only with the written acceptance of the Owner. All solids or semi-solids resulting from the cleaning operations shall be removed from the site and disposed of at a location approved by the Owner.
2. Root Removal: All roots shall be removed. Special attention shall be given during the cleaning operation to assure complete removal of roots from joints in lines and manholes. Procedures may include hydro-cleaning and the use of mechanical equipment such as rodding machines, bucket machines and winches using root cutters, lumberjacks, chain cutters/knockers and porcupines.
3. Degree of Cleaning: All dirt, debris, roots and other solid and liquid materials shall be removed from the sewer system to the extent that closed circuit television inspection can be performed. Light cleaning only, shall be conducted on all new sanitary sewer pipe. An Owner representative shall define the extent of the cleaning to be performed on existing pipes included within a given work order. The level of cleaning shall be defined as follows:
 - 3.1 Light Cleaning: The removal of ¼ diameter or less of sand and/or debris from a section of pipe. The removal of roots and/or tuberculation.
4. Manhole Clean-up: Clean up operations shall consist of cleaning all debris out of the man hole and off the ground around the manhole. This material shall be collected at the downstream manhole and disposed of in a sanitary manner in a location acceptable to the Owner.
5. Debris Disposal: All debris removed from the sewer shall be disposed of properly by and at the expense of the contractor. Transportation of debris or other material by the contractor shall be done in vehicles or equipment which contain the debris or other material in such a manner to minimize objectionable odor and avoid the possibility of dripping, spilling, scattering, leaking or blowing. Should mishaps occur for any reason, the contractor shall be responsible for cleaning up any debris or other material to the satisfaction of the Owner or other authorities having jurisdiction. All vehicles transporting debris or other material shall not exceed the maximum allowable load limits of any road being used.

- j. Restoration: The contractor shall be responsible for damage to public and private property which occurs as a direct result of the cleaning operations. The cost of restoring any damaged area to conditions prior to cleaning shall be borne by the contractor.
- k. Additional Cleaning: Should subsequent video inspection of cleaned sewers reveal that additional cleaning is required, the contractor shall re-clean the line at no additional expense to the Owner. Any additional video inspection or re-set up of video equipment required due to re-cleaning shall be at no additional expense to the Owner.

E. PRE- AND POST-WORK INSPECTIONS:

Prior to commencement of any proposed CIPP work and prior to acceptance of any completed CIPP work the sanitary sewers shall be videoed under the direct supervision of an Owner representative. An Owner representative must be on site during the entire inspection procedure period. If video inspection is performed without an Owner representative present, the video will not be accepted by the Owner and must be re-done in the presence of an Owner representative. One (1) copy of the DVD video and associated video logs shall be submitted to the Owner prior to scheduling the pre-final. If defects or problems are observed on the video, contractor shall meet with Owner staff to determine the acceptable method of repair. All work involved with repair shall be at no cost to the Owner.

Television inspection is mandatory and required to be provided by the contractor on all sewer mains that CIPP work has been done through this contract. Only pan and tilt type cameras will be allowed. Two (2) copies each of the written report and USB drive or archive quality DVD video record of the inspection with audible description of run, direction, location and description of any defect or abnormality shall be provided to the Owner at the time of the inspection. This shall be a color video with good clarity. No black and white or poor quality videos will be accepted. Television inspection shall be scheduled a minimum of seventy-two (72) hours in advance and a Owner representative is required to be on-site during entire length of each television inspection otherwise, the television inspection will be deemed invalid. Prior to televised work, all lines shall be cleaned in accordance with Technical Specifications. Contractor shall use NASSCO standard coding for video, LACP coding protocols for laterals.

F. INSTALLATION OF CIPP

- 1. CIPP installation shall be in accordance with ASTM F1216, Section 7 or ASTM F1743, Section 6, with the following modifications:
 - i. Resin impregnation – The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the potential loss of resin

during installation through cracks and irregularities in the original pipe wall, as applicable.

- ii. Tube insertion – The wet out tube shall be positioned in the pipeline using either inversion or a pull-in method as defined within relevant ASTM standards previously stipulated. If pulled into place, a power winch or its equivalent should be utilized and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.
- iii. Temperature gauges shall be placed between the tube and the host pipe's invert position to monitor the temperatures during the cure cycle.
- iv. Curing shall be accomplished by utilizing hot water under hydrostatic pressure or steam pressure in accordance with the manufacturer's recommended cure schedule. A cool-down process shall be conducted that complies with the resin manufacturer's specification.
- v. Reinstatement of branch connections: It is the intent of these specifications that branch connections to buildings be re-opened without excavation, utilizing a remotely controlled cutting device, monitored by CCTV. Unless otherwise directed by the Owner, all laterals will be reinstated. No additional payments will be made for excavations for the purpose of reopening connections.

G. MAINTENANCE OF TRAFFIC (MOT):

- 1. It shall be the responsibility of the contractor to furnish all traffic control as per Florida Department of Transportation (FDOT) specifications as outlines in the "Work Zone Traffic Control for Maintenance and Utility Operation" (latest edition) for all aspects of assigned work.
- 2. The contractor shall perform all construction activity so that access to businesses can be maintained during non-working hours. Prior to access blockage, written notice will be given to the blocked business/resident a minimum of forty-eight (48) hours in advance, either mailed or hand-delivered with a copy of each furnished to the property or business owner.
- 3. The contractor shall maintain at least one lane of vehicular traffic at all times. The contractor shall also provide safety barricades and flag persons as required to properly maintain traffic flow. All traffic maintenance requirements contained in the FDOT "*Manual on Traffic Control and Safety Practices*" (latest edition) shall be conformed with, and shall be considered to be part of these specifications. The contractor shall

prepare and submit a traffic maintenance plan for acceptance by the Owner prior to the start of work.

H. LOCATES: Contractor responsible for all utility locates.

I. ISOLATION AND BYPASS OPERATIONS:

- a) Contractor shall be solely responsible for all isolation and bypass operations under all conditions. The contractor's objective of flow bypass and/or diversion pumping is to maintain an efficient and uninterrupted level of service to wastewater collection system users while maintenance of construction operations (including rehabilitation, repair or replacement) are facilitated on the segments being bypassed and/or from which flow is being diverted by:
 - 1. Ensuring that bypass and diversion pumps are adequately fueled, lubricated and maintained.
 - 2. Ensuring backup spare parts are expeditiously applied to the flow bypass and/or diversion pumping system in the event of component breakdown.
 - 3. Ensure an emergency backup plan is smoothly implemented in the event of system failure.
 - 4. Preventing backup, spillage, flooding or overflow onto streets, yards and unpaved areas or into building, adjacent ditches, storm sewers and water ways while flow bypass or diversion pumping takes place, and
 - 5. Ensuring that installation, startup and subsequent disassembly of the flow bypass and diversion pumping system is smoothly transitioned.
 - 6. Coordinating with Owner for modifying the operations plan, which may include temporary suspension of pump station operations or performing work during periods of low flow.
 - 7. Tanker trucks, if necessary and only when approved by Owner, which will be the responsibility of the Contractor.
- b) Flow bypass and diversion pumping shall be done in such a manner so as not to damage private or public property, or create a nuisance or public menace. The pumped sewage shall be in an enclosed hose or pipe that is adequately protected from traffic and shall be redirected into the wastewater collection system. After the work is complete, flow shall be returned to the sewer and all temporary equipment removed.

- c) When pumps are operating, an experienced bypass/diversion pump maintenance operator/mechanic and/or deputy shall continuously be on site to monitor the operation of the entire bypass/diversion system. The operator/mechanic and/or deputy shall comprehensively, methodically and continuously:
1. Adjust pump speed as appropriate so as not to adversely impact upstream or downstream flow condition levels.
 2. Check that the effectiveness and security of bulkheads, dams, diaphragms, plugs, valves, weirs and all other flow control devices are working effectively and according to plan.
 3. Check the integrity of hoses and couplings along the entire bypass/diversion system.
 4. Monitor lubrication levels and top off as necessary.
 5. Facilitate minor repairs as required.
 6. Report to Owner on problems arising.
- d) The contractor shall be solely responsible for planning and executing sewer flow control, bypass and diversion pumping operations. The contractor shall be entirely liable for damages to private or public property that may result from his/her operation and for all cleanup, disinfection, damages, and resultant fines in the event of spillage, flooding or overflow.
- e) In the event of accidental overflow or spillage, the contractor shall immediately stop the overflow and take action to clean up and disinfect the spillage. The Owner shall be notified immediately and in any event not less than twenty-four (24) hours following the occurrence.
- Should fines be subsequently imposed as a direct result of the overflow or spillage and the contractor is deemed to be entirely responsible, the contractor shall pay such fines as are imposed by the authorities. The Owner shall pay no fine(s) where it is shown the contractor was entirely responsible for any overflow or spillage.
- f) Once by-pass pumping is underway at any given site, work shall be completed as efficiently as possible without interruption.

J. WORK PRODUCT SUBMITTALS:

- a) Bypass Pumping: Submittals for the by-pass pumping plan are to be submitted and accepted no less than two weeks prior to execution of the work. The contractor is not to mobilize prior to acceptance of the pumping plan.

- b) Videotaping: Contractor is to submit one copy of video inspection prior to the start of work and after CIPP lining is completed for each project.

K. SITE RESTORATION:

1. The contractor shall restore the work site(s) on a daily basis where practical. All obstruction shall be cleared from roadways, sidewalks, bike paths and other public thoroughfares daily, to the largest extent possible. A public nuisance will not be created during restoration activities. All restoration activities are to be completed within a minimum of fourteen (14) calendar days of work being finished in a work area.
2. Site Restoration shall be performed in accordance with the following Sections:
 - Section 02140 Dewatering
 - Section 02221 Trenching, Backfilling and Compacting
 - Section 02370 Erosion and Sediment Control
 - Section 02750 Removing and Replacing Pavement
 - Section 02767 Sanitary Sewer Service Lateral Rehabilitation
 - Section 02936 Grassing, Seeding or Sodding.

L. WARRANTY:

- a. Contractor warrants to Owner that all products and work provided by Contractor to Owner under this Agreement will be free from material defects in workmanship and materials for a period of five (5) years from the earlier of the date on which Contractor's work is accepted by Owner or the date on which the Contractor completes performance and leaves the worksite. In the event that a material defect in workmanship or materials supplied by Contractor is found during the five-year period following acceptance of the work, then such defect shall be repaired, replaced or adjusted by Contractor at no additional cost to Owner. Owner's exclusive remedy in the event of any warranty claim hereunder is limited to correction of such defect, adjustment, repair or replacement as the Contractor shall at its sole option elect. The foregoing warranty is the exclusive warranty provided by contractor and is given in lieu of all other warranties, whether express, implied or statutory, including but not limited to, any implied warranties of merchantability or fitness or suitability for a particular purpose or use; and all other warranties are hereby expressly disclaimed.
- b. In no event shall Contractor's liability for warranties hereunder exceed the purchase price paid by the Owner for Contractor's work and materials.

- c. The warranty set out above shall be void and of no effect in the event that (i) Contractor is not notified of claim of defect within the five year period provided above; (ii) Contractor is not provided timely and unrestricted access to the site at which the claimed defect is located in order to investigate and/or repair, adjust or replace the work or materials claimed to be defective or Contractor is not provided suitable working conditions to perform such investigation, repair, adjustment or replacement; (iii) any materials or work is exposed to chemicals or substances other than those listed in the Specifications to this Agreement as accepted by Contractor; (iv) site conditions or pipeline, conduit or access way conditions are other than those disclosed to and accepted by Contractor; (v) Owner's site, pipeline, conduit or access ways are cleaned or modified in a manner not disclosed in writing to and accepted in writing by Contractor in advance of commencement of Contractor's work or tampered with prior to, during or after completion of Contractor's work; or (vi) the work, the site at which the work is performed or the materials provided by Contractor are otherwise abused or misused.

END OF SECTION 02766

SECTION 02767

SANITARY SEWER SERVICE LATERAL REHABILITATION

PART 1 - GENERAL

A. SUMMARY

It is the intent of this portion of the specification to provide for the re-construction of 4-inch through 6-inch diameter service laterals and connections in 8" through 24" mainline pipes, normally without excavation, by the installation of a one-piece resin impregnated, flexible, non-woven felt tube installed into the existing lateral connection utilizing a pressure apparatus positioned in the mainline pipe. Curing shall be accomplished by use of ambient cure resin or other approved method to cure the resin into a hard impermeable cured-in-place pipe (CIPP) liner. When cured, the liner shall have a watertight connection seal at the mainline and extend over the length of the service lateral in a continuous one-piece structural pipe-within-a-pipe.

B. QUALIFICATIONS OF CONTRACTOR

The contractor or subcontractor performing the work of this section shall be employees of the company manufacturing the CIPP Lateral Lining system components, or shall be licensed by the system manufacturer. The Manufactured System must have a minimum of a five (5) year history of satisfactory performance with a minimum of 30,000 CIPP lateral installations. The contractor or subcontractor shall have a minimum of two (2) years of service continuous experience installing CIPP Lateral Lining in pipe of similar size, length and configuration as proposed in this project. In addition, the contractor or subcontractor shall have successfully installed 15,000 CIPP laterals in a wastewater collection system application. The onsite Superintendent must have installed over 5,000 CIPP laterals of like condition for this geographic area and have a minimum of 5 years of CIPP industry experience.

C. RELATED SECTIONS

- a. Section 02140 - Dewatering
- b. Section 02221 – Trenching, Backfilling and Compacting
- c. Section 02370 – Erosion and Sedimentation Control
- d. Section 02750 – Removing and Replacing Pavement
- e. Section 02936 – Grassing, Seeding, or Sodding.

D. ACTIVITIES INCLUDED

- a. Bypass pumping
- b. Pipe cleaning

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- c. Closed circuit television (CCTV) inspection
- d. Liner installation
- e. Cleanout assembly installation
- f. Site restoration.

E. REFERENCES

- a. This specification references ASTM test methods which are made a part hereof by such reference and shall be the latest edition and revision thereof.
 - i. ASTM F1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
 - ii. ASTM F1743 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
 - iii. ASTM D5813 - Standard Specification for Cured In Place Thermosetting Resin Sewer Piping Systems.

F. SUBMITTALS

- a. Product data
 - i. Resin
 - 1. Long term test creep data confirming the resin system's 50-year design life in accordance with ASTM D2990.
 - 2. Chemical Resistance per ASTM F1216
 - 3. Certificate of Compliance with ASTM F1216
 - 4. Material Safety Data Sheets (MSDS)
 - ii. Liner
 - 1. Certificate of Compliance in accordance with ASTM F1216
 - 2. Certificate of Compliance in accordance with ASTM F1743 for pull-in-place tubes.
- b. CIPP wall thickness design calculations (for lateral liner) in accordance with ASTM F1216.

PART II - PRODUCTS

A. MATERIALS

- a. GENERAL REQUIREMENTS:
 - i. Tube and resin will meet the requirements of ASTM F1216, F1743 and D5813.
 - ii. In industrial areas subject to possible flows other than domestic sewage, the Owner shall obtain samples of the dry weather sewage flow to be

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analyzed for chemical content. This analysis shall be supplied to the Installer for his information.

b. CIPP LATERAL MATERIALS:

- i. The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit specified by the Owner. Allowance shall be made for circumferential stretching during insertion. The liner shall be a one piece joint-less polyester felt tube that will create a watertight seal at the mainline interface.
- ii. The minimum length shall be 36 inches (3 feet) to effectively span the distance from the lateral connection at the main or to the desired termination location in the service lateral pipe. For the purpose of this specification, the termination point shall be a distance within 18 inches of the intersection of a cleanout or property line. Lateral lining will be accomplished without a cleanout when possible. In the event a cleanout is required to complete the lining of the lateral, the Contractor is responsible for including the costs associated with the installation of the cleanout in his bid price for lateral lining.

When required, an overlap method is performed with a pull-in-process installation from a cleanout or access point back to the main. In either case, the lateral liner must provide a watertight seal at the mainline and a structural repair of the lateral over the specified length. The Installer shall verify the lengths in the field before impregnation of the resin.

- iii. Unless otherwise specified, the Installer shall furnish a specially designed, unsaturated, Polyester or Vinylester resin catalyst system compatible with the cured-in-place process that provides cured physical strengths specified herein.

c. PHYSICAL STRENGTH:

- i. The structural performance of the finished pipe must be adequate to accommodate all anticipated loads throughout its design life. No cured-in-place pipe reconstruction technology will be allowed that requires bonding to the existing pipe for any part of its structural strength. Only resin vacuum impregnation will be allowed. If reinforcing materials (fiberglass, etc.) are used, the reinforcing material must be fully encapsulated within the resin to assure that the reinforcement is not exposed, either to the inside of the pipe or at the interface of the CIPP and the existing pipe.
- ii. Design methods are to be derived from traditionally accepted pipe formulas for various loading parameters and modes of failure. All equations will be modified to include ovality as a design parameter. The

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design method shall be submitted to the Engineer for approval prior to the pre-bid conference.

- iii. The CIPP lateral pipe shall conform to the minimum structural standards as listed below:

PROPERTY	ASTM	RESULTS
Flexural Stress	ASTM D790	4,500 psi
Flexural Modulus	ASTM D790	250,000 psi

B. APPROVED MANUFACTURERS/PRODUCTS:

- a. BLD “Service Connection Seal + Lateral” of BLD Services, LLC
- b. or pre-approved equal.
- c. Cleanout assemblies in accordance with Exhibits 1 and 2 included at the end of this section.

PART III - EXECUTION

A. INSTALLATION PREPARATIONS:

- a. Access – If the Contractor requires access through a cleanout or access pit to complete the lateral lining, the costs associated with the cleanout or access pit will be the responsibility of the Contractor and must be included within the Lateral CIPP Lining bid item. If a cleanout already exists or is required by the Owner, it shall be constructed of materials which provide a four inch (4”) minimum diameter circular opening, if service lateral is six inch (6”) than a six inch minimum diameter opening is required.
- b. Safety – The Installer shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving entering confined spaces.
- c. Cleaning of Sewer Line – The intent of this specification is for cleaning of the lateral to be accomplished from the mainline pipes via lateral launching equipment. If the lateral cannot be cleaned using industry standard cleaning heads that can be launched from the mainline then a cleanout will be required and considered changed conditions. The laterals shall be cleaned a sufficient length to ensure the specified length of sewer is ready for lining. It shall be the responsibility of the Installer to verify, prior to installation, that all internal debris has been removed from the sewer line. Internal debris consists of broken pipe sections, roots, loose gravel, etc.
- d. Installation of Cleanout – If required by field conditions, a cleanout will be installed in accordance with Exhibit 1 and Exhibit 2 at the end of this section.
- e. Inspection of Pipelines – It is the intent of this specification for inspection of

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the lateral to be accomplished from the mainline pipes via lateral launching equipment. If the lateral cannot be inspected using industry standard inspection equipment that can be launched from the mainline then a cleanout will be required and considered changed conditions. Inspection of pipelines shall be performed by experienced personnel trained in locating breaks and obstacles by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the lateral liner into the pipelines, and it shall be noted so that these conditions can be corrected. A USB drive or archive quality DVD and suitable log shall be kept for later reference by the Owner. Contractor shall use NASSCO standard coding for video, LACP coding protocols for laterals.

- f. Bypassing Sewage – The Installer, when required, shall provide for the flow of sewage around the section or sections of mainline pipe where the service lateral designated for lining is located. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow. It is assumed that flows in the lateral specified for lining will not require bypass pumping.
- g. It is required that the service lateral be inactive during the time of installation. This is normally accomplished by turning off the homeowner's services or requesting that the homeowner relinquish using their services during the period of installation. Notification will be distributed to impacted residents 24 hours in advance of the lateral liner installation.
- h. Line Obstructions – If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, as in solids, dropped joints or collapsed pipe then the Installer shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be accepted in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.
- i. In the case of lined mainline pipes, the lateral connection specified for rehabilitation shall be reinstated to 100% of its original size to accept the CIPP lateral.

B. INSTALLATION OF LATERAL LINING

- a. The Installer shall designate a location where the liner will be vacuum impregnated prior to installation. The Installer shall allow the Owner to inspect the materials and "wet-out" procedure. A catalyst system compatible with the resin and liner shall be used.
- b. The wet-out liner shall be loaded inside a pressure apparatus above ground and

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utilizing a hydrophilic sealant (or equivalent) on the backside of the connection to enhance a watertight seal. Also, a two-part 100% solid epoxy (reference ASTM C-881) or a Silicate Resin shall be applied to the lateral interface to enhance adhesion against the host pipe. The pressure apparatus, with an end attached to a robotic device, shall be winched through the mainline pipe to the service connection. The robotic device, together with a television camera, will be used to position the pressure apparatus' inversion elbow at the service connection opening. Air pressure, supplied to the pressure apparatus through an inversion hose, shall be used to invert the wet-out liner through the lateral pipe to the cleanout/access point or "Right of Way" point. The inversion head will be adjusted to be of sufficient pressure to cause the impregnated liner to invert completely in the lateral pipe and hold the tube tight to the pipe wall. Care shall be taken during the curing process so as not to overstress the tube.

- c. Curing – In most circumstances, an accelerated ambient-temperature curing resin system will be utilized, however if a heat cure is required, the Installer shall supply a suitable heat source and recirculation equipment. The equipment shall be capable of delivering the approved heating medium throughout the section to the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.
- d. If a heat cure is required, the heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing air/steam or water supply. Fluid temperature in the line during the cure period shall be recommended by the resin manufacturer. **NOTE: No UV cure systems will be allowed.**
- e. Initial cure shall be deemed to be completed when inspection of the exposed portions of the CIPP appears to be hard and sound and/or the temperature gauge indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the installation process.
- f. Cool-down – The Installer shall cool the hardened CIPP to a temperature below 100°F before relieving the pressure in the pressure apparatus. Cool-down may be accomplished by the introduction of cool air into the pressure apparatus to replace water being forced out of the pressure apparatus. Care shall be taken to maintain proper pressure throughout the cure and cool-down period.
- g. Finish – The finished CIPP shall be a watertight connection seal at the mainline and extend continuous over the entire length of the service lateral and be free of dry spots, lifts, and delamination. This continuous one piece structural pipe-within-a-pipe shall not inhibit the closed circuit television post video inspection of the mainline or service lateral pipes.

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- h. Testing – For every 50 laterals, one flat plate sample shall be taken and sent to a 3rd party test laboratory for confirmation of short term flexural modulus and strength properties in accordance with ASTM F1216. The test results shall meet or exceed the values used in the design of the CIPP lateral liner.
- i. During the warranty period, any defects which will affect the integrity or strength of the CIPP liner shall be repaired at the Installer's expense in a manner mutually agreed upon by the Owner and the Installer.
- j. After the work is completed, the Installer will provide the Owner with a USB or archive quality DVD showing the completed work including the restored conditions. Contractor shall use NASSCO standard coding for video, LACP coding protocols for laterals.

C. SITE RESTORATION

- a. Upon acceptance of the installation work, the Installer shall reinstate the project area affected by his operations.
- b. Site Restoration shall be in accordance with the following related specifications:
 - i. Section 02140 - Dewatering
 - ii. Section 02221 – Trenching, Backfilling and Compacting
 - iii. Section 02370 – Erosion and Sedimentation Control
 - iv. Section 02750 – Removing and Replacing Pavement
 - v. Section 02936 – Grassing, Seeding, or Sodding.

D. MEASUREMENT and PAYMENT:

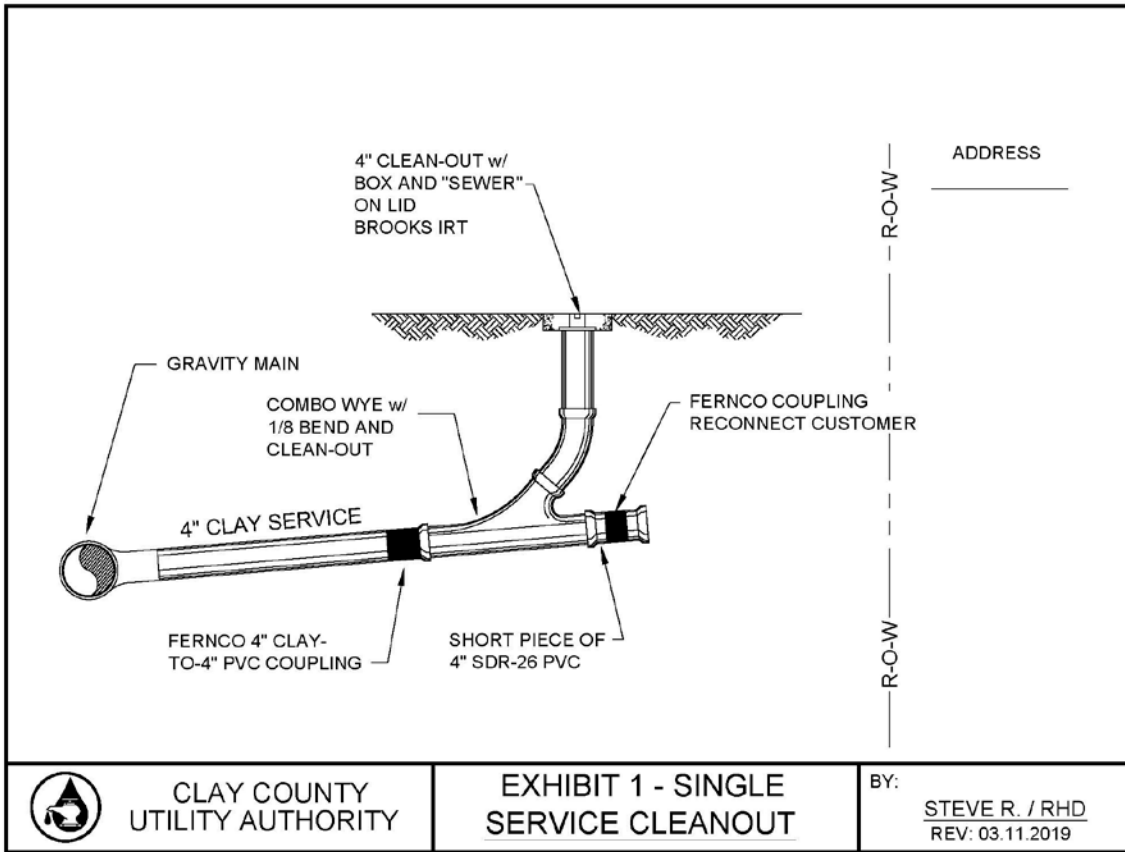
- a. Measurement for the work for the Lateral CIPP Lining included in this section will be in accordance with the units set forth in the proposal. Unit prices shall include all labor, materials and equipment required to complete the work as specified. The unit prices shall also include mobilization (except for emergency response), demobilization, CCTV prior to and after lining, lateral cleaning, and bypass pumping of mainline flow.
- b. Measurement for installation of a cleanout will be per cleanout and will include all labor and materials to install the cleanout.
- c. Measurement for Site Restoration work will be measured as set forth in the applicable related site restoration specifications listed above.
- d. Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Progress payments will be made monthly based on the work performed during that period.

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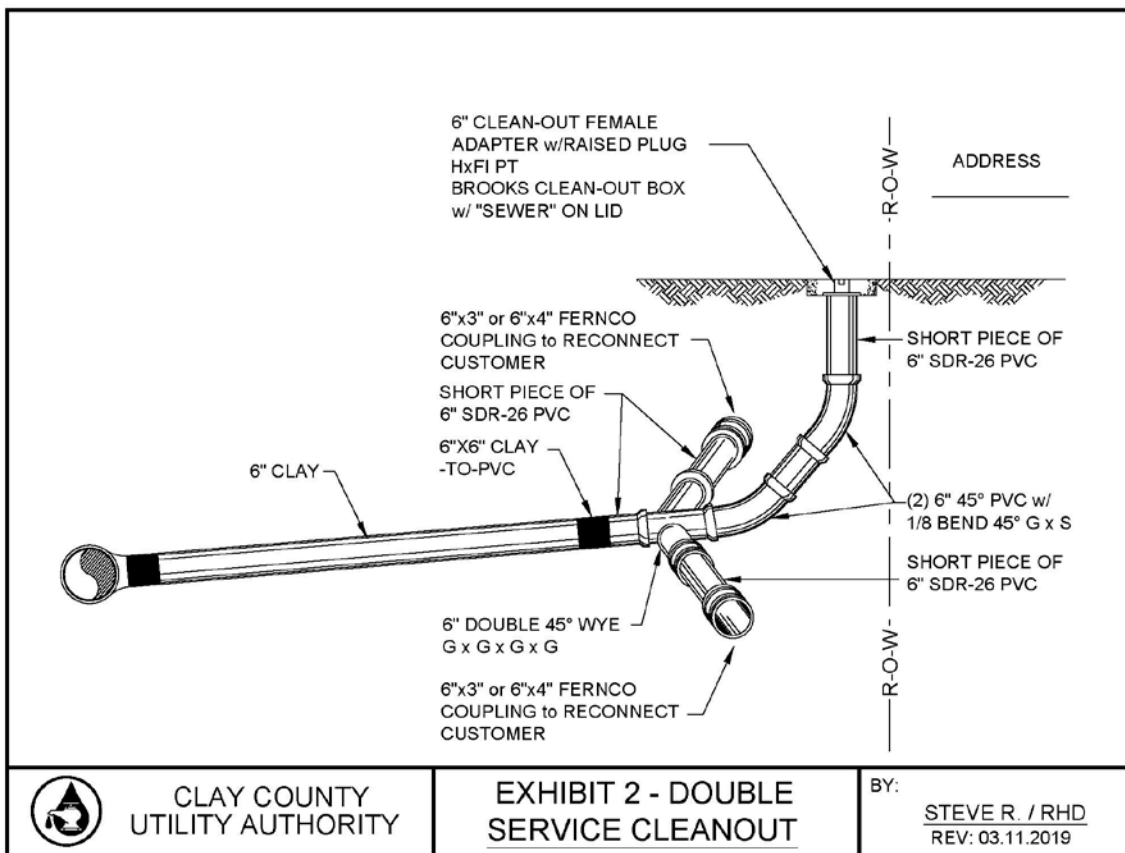
E. WARRANTY:

- a. Contractor warrants to Owner that all products and work provided by Contractor to Owner under this Agreement will be free from material defects in workmanship and materials for a period of five (5) years from the earlier of the date on which Contractor's work is accepted by Owner or the date on which the Contractor completes performance and leaves the worksite. In the event that a material defect in workmanship or materials supplied by Contractor is found during the five year period following acceptance of the work, then such defect shall be repaired, replaced or adjusted by Contractor at no additional cost to Owner. Owner's exclusive remedy in the event of any warranty claim hereunder is limited to correction of such defect, adjustment, repair or replacement as the Contractor shall at its sole option elect. The foregoing warranty is the exclusive warranty provided by contractor and is given in lieu of all other warranties, whether express, implied or statutory, including but not limited to, any implied warranties of merchantability or fitness or suitability for a particular purpose or use; and all other warranties are hereby expressly disclaimed.
- b. In no event shall Contractor's liability for warranties hereunder exceed the purchase price paid by the Owner for Contractor's work and materials.
- c. The warranty set out above shall be void and of no effect in the event that (i) Contractor is not notified of claim of defect within the five year period provided above; (ii) Contractor is not provided timely and unrestricted access to the site at which the claimed defect is located in order to investigate and/or repair, adjust or replace the work or materials claimed to be defective or Contractor is not provided suitable working conditions to perform such investigation, repair, adjustment or replacement; (iii) any materials or work is exposed to chemicals or substances other than those listed in the Specifications to this Agreement as accepted by Contractor; (iv) site conditions or pipeline, conduit or access way conditions are other than those disclosed to and accepted by Contractor; (v) Owner's site, pipeline, conduit or access ways are cleaned or modified in a manner not disclosed in writing to and accepted in writing by Contractor in advance of commencement of Contractor's work or tampered with prior to, during or after completion of Contractor's work; or (vi) the work, the site at which the work is performed or the materials provided by Contractor are otherwise abused or misused.

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Section 02767-9



Section 02767-10

END OF SECTION

Section 02767-11

CCUA Bid No. 18/19-A7

Sewer, Wetwell and Manhole Rehabilitation Services Continuing Contract

SANITARY SEWER SERVICE LATERAL REHABILITATION

April 2019

SECTION 02768

MANHOLE AND LIFT STATION WETWELL REHABILITATION

PART I – GENERAL

A. SCOPE OF WORK:

The Work involves supplying all labor, materials and equipment for repairing, adjusting, modifying, or installing a specialty coating or lining for the interior surfaces of manholes and lift station wet wells, at a minimum. The Contractor shall furnish, install, and test the structures coatings as specified herein. All references to Industry Standards (ASTM, ANSI, etc.) shall be the latest revision unless otherwise stated. Only those materials specified herein or included in the Clay County Utility Authority (CCUA) Approved Materials Manual shall be installed.

C. WORKMANSHIP:

All work shall be proved to be in first class condition and constructed in accordance with the drawings and specifications. All defects disclosed by tests and inspection shall be remedied immediately by the Contractor at no expense to the Owner.

D. COVERAGE:

The lining/coating shall cover all concrete surfaces within the wet well or manhole including the adjustment ring area.

E. PROJECT SCHEDULE AND COOPERATION:

The project schedule shall be established on the basis of working a normal work schedule including five days per week, single shift, eight hours per day. Unless approved otherwise by the Owner, normal general items of work, such as TV inspections, liner installation, density testing and final inspections, shall be scheduled during the normal work schedule. Due to operations and manpower limitation CCUA will require the contractor to perform work outside of the normal work schedule. These operational and manpower limitation, including but not limited to, tie-in work (cut-in work or other tie-in work) and other phases of the work which may impact the continued (non-interruptible) service to existing CCUA's customers. The contractor shall plan and anticipate the cost impact of these system limitations and provide such work or services at no additional cost to the Owner.

F. SHOP DRAWING SUBMITTALS:

Actual catalog data brochures and descriptive literature will not be required for items of standard usage included in CCUA's Approve Materials Manual. Any specialty item not shown in this manual will require a complete shop drawing submittal. The Owner may at

any time require the Contractor to provide a complete detailed shop drawing submittal for any material which, in the Owner's opinion, may not be in compliance with the CCUA Standards.

G. WARRANTY:

The liner manufacturer shall warrant the liner against defects for at least ten (10) years after the date of acceptance by CCUA. Defects are defined as cracking, delamination or leaking. The warranty shall require the manufacturer to supply all necessary labor, materials, and equipment to repair defects to the satisfaction of CCUA. The Contractor and/or manufacturer shall not make any exemption or exception to the above stated conditions or warranty.

PART II – PRODUCTS

A. INTERIOR MANHOLE/LIFT STATION WETWELL COATING

1. GENERAL:

The work shall include the furnishing and installation of an interior protective coating system including all necessary labor, materials, equipment and tools as required for a complete installation. This liner material shall provide a corrosion resistant liner to prevent any deterioration of concrete surfaces from hydrogen sulfide.

2. PROPERTIES:

The lining system to be utilized shall be 100% calcium aluminate cement with 100% calcium aluminate aggregate and with the following minimum performance parameters:

PARAMETER	12 HRS	24 HRS	7 DAYS	28 DAYS
Compressive Strength, psi (ASTM C945)	>6000	>7000	>9000	>9000
Flexural Strength, psi (ASTM C293)	>1000	>1300	>1400	>1400
Shrinkage at 90% Humidity (ASTM C596)		>0.02	>0.04	>0.06
Freeze/Thaw after 300 Cycles (ASTM C666)	No Damage	No Damage	No Damage	No Damage
Tensile Strength (ASTM C900 modified)	200 – 300 psi Tensile Strength			
Air Void Content 7 Days (ASST. C457)	3%			
Specific Gravity/Absorption Test 7 Days (ASTM C642)	4-5%			

3. MATERIALS:

Mortar furnished under this specification shall be pre-packaged mortar, including all cement, aggregate, and any required admixtures or fibers. It is the intent of this specification that the Contractor only be required to add the proper amount of potable water so as to produce a mortar suitable for pneumatic application. Typical package weights shall not be less than 50 pounds. Coating shall be 100% calcium aluminate mortar such as Sewpercoat manufactured by Kerneos Inc, or Geocrete manufactured by Quadex, Inc., or CCUA pre-approved equal.

B. COATING/LINING REPAIR

Coating or lining repair for a wetwell or manhole will be performed with 100% calcium aluminate mortar such as Sewpercoat manufactured by Kerneos Inc, or Geocrete manufactured by Quadex, Inc., or CCUA pre-approved equal.

C. MANHOLE ADJUSTMENT

Materials for manhole adjustment shall be in accordance with CCUA Standard Materials for the following:

- a. Adjustment rings
- b. Cone or riser section
- c. Manhole frame and cover
- d. Invert replacement
- e. Inside drop system.

D. STOP LEAK REPAIR

CCUA approved products for leak repair include Hyperform by Quadex, Quad-Plug™ by Quadex, Seal Guard II, Avanti AV 202 Multigrout, and Parson Seal-Tite. All other products must be pre-approved by CCUA before installation.

PART III – EXECUTION

A. CEMENTITIOUS BARRIER

1. INSTALLATION:

- 1.1 High pressure water or sand spray blasting equipment shall remove all deteriorated concrete, (minimum of 3500 psi), hard contaminants, localized micro-organisms and gas contaminants from the concrete walls, floor, ceiling, and other concrete structures. Final product shall be a cleaned, exposed and virgin

concrete aggregate ready for rehabilitation material. The blasting equipment shall be suited to completely remove deteriorated concrete and hard contaminants from the existing concrete surfaces. Containment unit to capture spent abrasive material shall be provided unless otherwise approved by the Owner.

1.2 After completion of surface preparation, blasting phase, perform the following seven point checklist, which is the inspection for:

- 1.2.1 Leaks
- 1.2.2 Cracks
- 1.2.3 Holes
- 1.2.4 Exposed Rebar
- 1.2.5 Ring and Cover Condition
- 1.2.6 Invert Condition
- 1.2.7 Inlet and Outlet Pipe Condition

1.3 After the defects in the structure have been identified, repair all leaks with a chemical or hydraulic sealant designed for use in field sealing of ground water. Severe cracks shall be repaired using a urethane based chemical sealant. Product to be utilized shall be as approved by the Owner prior to installation. Repairs to exposed rebar, defective pipe penetrations or inverts, etc. shall be repaired utilizing non-shrink grout or Owner approved alternate method.

1.4 Materials shall be sprayed applied by either a wet gunning (low pressure spray) or dry gunning (shotcrete) method and shall conform to the "Suggested Manufacturer Procedures" document as supplies by the manufacturer. The equipment shall be clean and free of any hydrated or unhydrated Portland Cement to prevent acceleration of SewperCoat. To ensure a good bond, the newly blasted surface shall be thoroughly moistened with water prior to application. The material shall be applied in one or more layers to such total thickness as required. A minimum of one-half inch shall be applied. After spraying, the material shall be brushed or trowel finished. A moist curing environment is typically activated by replacing the manhole lid cover. If not, a heavy application of curing compound shall be applied.

B. LEAK REPAIR

The work on some manholes/wetwells will include applying a dry quick-setting material designed to instantly stop running water or seepage. Installation of leak-stop materials shall be in accordance with manufacturer's recommendations and the following minimum specifications:

1. The area to be repaired must be clean and free of all debris per the guidelines set forth elsewhere in these specifications.
2. Once cleaned, prepare crack or hole by chipping out loose material.

3. Apply the dry quick-setting material to the active leak, per the manufacturer's recommendations.

C. MAINTENANCE OF TRAFFIC (MOT):

1. It shall be the responsibility of the contractor to furnish all traffic control as per Florida Department of Transportation (FDOT) specifications as outlines in the "Work Zone Traffic Control for Maintenance and Utility Operation" (latest edition) for all aspects of assigned work.
2. The contractor shall perform all construction activity so that access to businesses can be maintained during non-working hours. Prior to access blockage, written notice will be given to the blocked business/resident a minimum of forty-eight (48) hours in advance, either mailed or hand-delivered with a copy of each furnished to the property owner or business.
3. The contractor shall maintain at least one lane of vehicular traffic at all times. The contractor shall also provide safety barricades and flag persons as required to properly maintain traffic flow. All traffic maintenance requirements contained in the FDOT "*Manual on Traffic Control and Safety Practices*" (latest edition) shall be conformed with, and shall be considered to be part of these specifications. The contractor shall prepare and submit a traffic maintenance plan for acceptance by the Owner prior to the start of work.

D. CONSTRUCTION VIDEO AND PHOTOGRAPHS

Contractor is responsible for documenting pre-existing site conditions in accordance with Section 01320 Construction Video and Photographs.

E. BYPASS PUMPING

1. The Contractor is responsible for the setup, installation, operation and maintenance of bypass pumping operations as required.
2. The Contractor shall prepare and submit a bypass pumping plan for each work area. The plan should detail the sequence of manhole rehabilitation system installations, plug locations, suction manholes, discharge manholes, pump size and pump locations. The plans should include preferred lane closures, if necessary.

END OF SECTION

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SECTION 02769

TREATMENT PLANT WETWELL REHABILITATION

PART I – GENERAL

A. DESCRIPTION

The work described within details a complete program for wastewater treatment plant wetwell rehabilitation and lining. This specification details the methods, procedures, materials and equipment required to produce “A Total Lining System for Wastewater Structures”. The completed system will provide a corrosion resistant liner that restores the surface profile and eliminates water infiltration and exfiltration.

B. SCOPE OF WORK:

The Work involves supplying all labor, materials and equipment for installing a specialty coating or lining for the interior surfaces of wastewater treatment plant wetwells, at a minimum. The Contractor shall furnish, install, and test the structures coatings as specified herein. All references to Industry Standards (ASTM, ANSI, etc.) shall be the latest revision unless otherwise stated. Only those materials specified herein or included in the Clay County Utility Authority (CCUA) Approved Materials Manual shall be installed.

C. WORKMANSHIP:

All work shall be proved to be in first class condition and constructed in accordance with the drawings and specifications. All defects disclosed by tests and inspection shall be remedied immediately by the Contractor at no expense to the Owner.

E. PROJECT SCHEDULE AND COOPERATION:

The project schedule shall be established on the basis of working a normal work schedule including five days per week, single shift, eight hours per day. Unless approved otherwise by the Owner, normal general items of work, such as TV inspections, liner installation, density testing and final inspections, shall be scheduled during the normal work schedule. Due to operations and manpower limitation CCUA may require the contractor to perform work outside of the normal work schedule. These operational and manpower limitations, including but not limited to, tie-in work (cut-in work or other tie-in work) and other phases of the work which may impact the continued (non-interruptible) service to existing CCUA’s customers. The contractor shall plan and anticipate the cost impact of these system limitations and provide such work or services at no additional cost to the Owner.

F. SUBMITTALS:

Actual catalog data brochures and descriptive literature will not be required for items of standard usage included in CCUA's Approve Materials Manual. Any specialty item not shown in this manual will require a complete shop drawing submittal. The Owner may at any time require the Contractor to provide a complete detailed shop drawing submittal for any material which, in the Owner's opinion, may not be in compliance with the CCUA Standards.

G. WARRANTY:

The liner manufacturer shall warrant the liner against defects for at least ten (10) years after the date of acceptance by CCUA. Defects are defined as cracking, delamination or leaking. The warranty shall require the manufacturer to supply all necessary labor, materials, and equipment to repair defects to the satisfaction of CCUA. The Contractor and/or manufacturer shall not make any exemption or exception to the above stated conditions or warranty.

PART II – PRODUCTS

A. Polyurethane/Modified Polymer Barrier

1. GENERAL:

The work shall include the furnishing and installation of an interior protective coating system including all the necessary materials, equipment and tools as required for a completed installation. Coating shall be SpectraShield as manufactured by CCI Spectrum, Inc., or CCUA pre-approved equal. The completed system shall provide a waterproof, corrosion resistant liner to prevent any deterioration of concrete surfaces from hydrogen sulfide and other corrosive gases/acids produced by wastewater and to prevent infiltration. To ensure total unit responsibility, all materials and installation thereof shall be furnished by, and coordinated with, one supplier/manufacturer.

2. MATERIALS AND EQUIPMENT:

2.1 The materials to be utilized in the lining of concrete structures shall be designed and manufactured to withstand the sever effects of hydrogen sulfide in a wastewater environment.

2.2 Abrasive blasting equipment should be suited to completed remove deteriorated concrete and hard contaminants from the existing concrete surfaces. Contaminant unit to capture spent abrasive materials shall be provided unless otherwise approved by the owner.

2.3 Equipment for installation of lining materials shall be high quality grade as

recommended by the manufacturer.

2.4 The lining system to be utilized shall be a multi-component stress panel liner system as described below:

2.4.1 Liner:

Installation	Liner
a. Moisture Barrier	Modified Polymer (Silicone modified polyurea)
b. Surfacers	Polyurethane/Polymeric Blend Foam
c. Final Corrosion Barrier	Modified Polymer (Silicone modified polyurea)

2.4.2 Moisture barrier: Modified polymer shall be sprayed, solvent-free, two-component polymeric, moisture/chemical barrier specifically developed for the corrosive environment of wastewater.

2.4.3 Surfacers: Polyurethane/polymeric blend foam shall be 100% CFC/HCFC free, low viscosity, two component, fire resistant, rigid structural filler.

2.4.4 Final Corrosion Barrier: Modified polymer shall be sprayed, solvent-free, two-component polymeric, moisture/chemical barrier specifically developed for the corrosive environment of wastewater.

2.4.5 Total thickness of multi-component stress panel liner shall be a minimum of 500 mils and shall sustain a 300 PSI pull test.

PART III – EXECUTION

A. SURFACE PREPARATION:

1. Abrasive blasting equipment shall remove all deteriorated concrete, hard contaminants, localized micro-organisms and gas contaminants from the concrete walls, floor, ceiling, and other concrete structures. Final product shall be cleaned, exposed and virgin concrete aggregate ready for rehabilitation material. Abrasive blasting equipment shall be suited to completely remove deteriorated concrete and hard contaminants from the existing concrete surfaces. Containment unit to capture spent abrasive material shall be provided unless otherwise approved by the Owner.
2. After completion of surface preparation, blasting phase, perform the seven-point checklist, which is the inspection for:

- 2.1 Leaks
 - 2.2 Cracks
 - 2.3 Holes
 - 2.4 Exposed Rebar
 - 2.5 Ring and Cover Condition
 - 2.6 Invert Condition
 - 2.7 Inlet and Outlet Pipe Condition
- 3. After the defects in the structure have been identified, repair all leaks with grout designed for use in field sealing of ground water. Severe cracks shall be repaired using urethane based chemical sealant. Product to be utilized shall be as approved by the Owner prior to installation. Repairs to exposed rebar, grout or Owner approved alternate method.
 - 4. Prior to installation of final liner material, if required, re-blast the entire structure and remove all abrasive materials.

B. MATERIAL INSTALLATION:

- 1. The limits of the corrosion protection system shall be all exposed concrete surfaces including walls, tap sections, risers, etc., unless otherwise approved by the Owner.
- 2. Application of multi-component system shall be in strict accordance with the manufacturer's recommendations. Final installation shall be a minimum thickness of 500 mils. A permanent identification number and date of work performed shall be affixed to the structure in a readily visible location.
- 3. Provide final written report to Owner detailing the location, date of report, and description of repair or original installation.
- 4. Inspection and repairs: Final concrete structure corrosion protection system shall be completely free of pinholes or voids. Entire exposed concrete surface shall be protected with corrosion protection system. Liner thickness shall be the minimum thickness described above. All defects identified during inspection such as pinholes, low film millage, etc. shall be repaired with same material and to same thickness as required of original installation.

END OF SECTION

SECTION 02936

GRASSING, SEEDING OR SODDING

PART 1- GENERAL

1.1 Scope of Work

- A. The work specified in this section consists of establishing a stand of grass within the areas called for and maintaining such areas until completion and final acceptance of the project. The methods specified herein are grassing by seeding and grassing by sodding.

1.3 Submittals

- A. Seed mix: Manufacturer's warranted analysis for percentages of mixture, purity, and germination
- B. Sod: State certification of origin and health of sod; sod supplier's recommended fertilizer application rates
- C. Fertilizer: Manufacturer's literature and data describing NPK ratio and recommended application rates
- D. Soil test results to determine fertilizer need.
- E. Watering Plan
- F. Mulch type.

PART 2 - PRODUCTS

2.1 Fertilizer

All fertilizer shall comply with state laws and regulations and shall be fully labeled at the time of delivery to the job site. For bidding purposes, the fertilizer shall be considered 10-10-10 which has a chemical analysis as follows:

Total nitrogen:	not less than 10%
Available phosphoric acid:	not less than 10%
Water-soluble potash:	not less than 10%.

Actual nutrients of fertilizer to be applied will be as determined by soil test results.

2.2 Seed Mixture

- A. Seed Mixture
Unless other types of seed are called for, seed shall be selected to match in situ varieties and seasons variations free of weeds and pest. Seed which has become wet

or moldy shall not be used. Seed shall have a minimum active germination of 40 percent and a total germination of 85 percent.

B. Certification of Seed

All seed shall meet the requirements of the State Department of Agriculture and Consumer Services and all applicable state and local laws. The Contractor shall submit to the Owner a certification tag for each type of seed used prior to sowing of seed. The certification tag shall have the following information:

1. Grass Type and Variety
2. Percent of Inert Matter
3. Germination Percentage
4. Percent of Weed Seed.

2.3 Sod

Sod shall be St. Augustine Floratam, Argentine Bahia, Centipede, or Bermuda, selected to match in situ varieties. In FDOT right-of-way, Bermuda sod shall be used. Sod shall be well-matted with roots and be free of weeds and pests. Where sodding will adjoin or be in sufficiently close proximity to private lawns, sod shall match type and variety of the affected property owners and acceptable to the Owner.

- A.** The sod shall be taken up in commercial-size rectangles, or rolls. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh, and uninjured, at the time of planting. It shall have a soil mat of sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be reasonably free of weeds and other grasses. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The sources of the sod may be inspected and acceptable to the Owner prior to being cut for use in the work. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.
- B.** Acceptable devices, such as sod cutters, shall be used for cutting the sod and due care shall be exercised to retain the native root soil intact.

- 2.4 Mulch:** The mulch shall consist of Milet, Rye, or Bahia straw. Other types of mulch may be used only when acceptable to the Owner.

PART 3 - EXECUTION

3.1 Preparation of Ground

Final grading and cleaning shall be completed prior to the preparation of ground for grassing. The areas to be grassed shall be scarified or loosened to a depth of at least six (6) inches. All areas shall be smooth and free of large clods, roots and other materials which may interfere with the work or future mowing and maintenance operation. No subsequent operations shall be commenced until the Owner has accepted the condition of prepared areas.

3.2 Fertilizing

Commercial fertilizer shall be spread uniformly over the area to be grassed by machine spreading at the rate recommended by manufacture, soil needs, and grassing. Immediately after the fertilizer is spread, it shall be raked and thoroughly mixed with the soil to a depth of approximately two inches.

3.3 Grassing by Seeding

When called for in the plans or special conditions, grass seed shall be furnished and placed in the areas to be grassed and maintained to assure a healthy stand of grass.

A. Placement of Seed

Seeding shall be done immediately after fertilizing, while the soil is still loose and moist. Four (4) foot wide sod strips shall be placed along and around edge of pavement, buildings, tanks, manholes, ditches, swales, and ponds prior to seeding. The seed shall be scattered uniformly over the area to be grassed by a mechanical hand spreader or other approved type of spreader. The rate of spreading shall as recommended by the supplier and sufficient for the establishment of permanent and total grass coverage unless otherwise designated.

B. Mulch

Immediately after completion of seeding, dry mulch shall be uniformly applied over the seeded area approximately two (2) inches, loose thickness. The mulch shall then be cut uniformly into the soil so as to produce a loose mulched thickness of three (3) to four (4) inches and rolled with a cultipacker, traffic roller or other suitable equipment. Mulch shall be suitable to promote the grown and establishment of the grass seed free of weeds or foreign material. After seeding and mulching is completed, the entire area shall be watered so as to provide optimum growth conditions for establishment of the grass.

3.3 Grassing by Sodding

When called for in the plans and special conditions, grass sod shall be furnished and placed in the areas to be grassed and shall be maintained to assure a healthy stand of grass.

A. Placement of Sod

Sod shall be incorporated into the project at the earliest practical time in the life of the contract. No sod which has been cut for more than 72 hours shall be used unless specifically authorized by the Owner after their careful inspection thereof. Any sod which is not planted within 24 hours after cutting shall be stacked in an acceptable manner and maintained properly moistened.

1. Sodding shall not be performed when weather and soil conditions are, in the Owner's opinion, unsuitable for proper results.
2. The sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by light tamping with appropriate tools or rolled with approved rollers.
3. Where sodding is used in drainage ditches, the setting of the pieces shall be staggered, such as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas the offsets of individual strips shall not exceed six (6) inches. In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces shall be tamped so as to produce a featheredge effect.
4. On areas where the sod may slide, due to height or slope, pegs driven through the sod blocks into firm earth, at suitable intervals shall be used and included in the contractors lump sum cost. Any pieces of sod which, after placing, show an appearance of extreme dryness shall be removed from the work at no extra cost to the Owner.

B. Certification of Sodding Materials

The Contractor shall comply with all current restrictions in regard to movement of sod, into or within areas which are outside of QUARANTINE BOUNDARIES for the white fringed beetle and the imported fire ant, as issued by the Division of Plant Industry, Florida Department of Agriculture and the Animal and Plant Health Inspection Service, United States Department of Agriculture. Prior to placement of sod, the Contractor shall submit to the Engineer a certification tag from each type of sod used stating the type and variety of sod and the date of cutting.

3.4 Watering of Grassed Areas

The grassed areas shall be watered for the duration of the contract so as to provide optimum growth conditions for the establishment of the grass at the Contractor's Expense. In no case, however, shall the period of maintaining such moisture be less than two weeks after planting. The water used may be obtained from an acceptable spring, pond, lake, stream or municipal water system. The water shall be free of excess and harmful chemicals, acids, alkalies, or any substance which might be harmful to plant growth or obnoxious to traffic. Salt water SHALL NOT be used. The Contractor shall make all arrangements for obtaining and transporting water to the job site.

3.5 Maintenance of Grassed Areas

The Contractor shall, at his expense, maintain the planted areas in a satisfactory condition until final acceptance of the project. Such maintenance shall include the filling, leveling, and repairing of any washed or eroded areas, as may be necessary. The Owner, at any time, may require replanting of any areas in which the establishment of the grass stand does not appear to be developing satisfactorily. If a planted area must be replanted due to the Contractor's negligence, carelessness, disease, or failure to provide routine maintenance of such area, such replacement shall be at the Contractor's expense.

END OF SECTION