



GREENVILLE UTILITIES COMMISSION
of
THE CITY OF GREENVILLE, NORTH CAROLINA

Request for Bids

for

GCP-10112
VOA Site C Road
Gas Improvements



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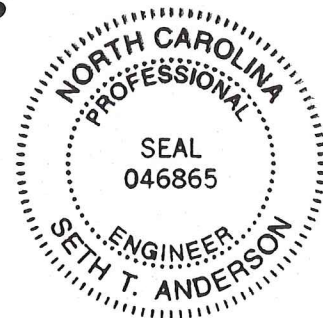


Frederick L. Stowe

Frederick L. Stowe, P.E.

Project Manager

Date: 4/25/22



Seth T. Anderson

Seth T. Anderson, P.E.

Project Engineer

Date: 4/25/22

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ADVERTISEMENT FOR BIDS*by***Greenville Utilities Commission of the City of Greenville, NC***for***The Greenville Utilities Commission
GCP-10112 VOA Site C Road Gas Improvements
Pitt County, North Carolina**

Sealed Bids for **the Construction of a 4.0-mile, 4-inch PE natural gas main** will be received by the Greenville Utilities Commission in the Engineering Center Conference Room at 3355 NC Hwy 43 North, Greenville, NC 27834 until **June 7, 2022** at **2 P.M.** and immediately thereafter publicly opened and read.

Bids must be enclosed in a sealed envelope, addressed to the Greenville Utilities Commission and the outside of the envelope must be marked **BID FOR GCP-10112 VOA Site C Road Gas Improvements**. All Bids must include the information specified in the format specified in the Instructions to Bidders, and all Bids must be made on blank forms provided with and included in the bound document. The name, address, and license number of the Bidder must be plainly marked thereon. Oral or faxed Bids are invalid and will be rejected.

Each Bid submitted must be accompanied by cash or a certified check, drawn on a bank or trust company authorized to do business in North Carolina, payable to the Greenville Utilities Commission in an amount at least equal to five percent (5%) of the total amount of the Bid, as a guarantee that a contract will be entered into. In lieu of cash or a certified check, the Bidder may submit a bid bond in the form prescribed in G.S. 143-129 as amended by Chapter 1104 of the Public Laws of 1951.

Contractors are notified that legislative acts relating to licensing of contractors will be observed in receiving bids and awarding contracts. It is the Bidder's responsibility to ensure and to provide proof of compliance with all applicable licensing requirements.

A **Pre-Bid Conference** will be held at the Greenville Utilities Commission Engineering Center at 3345 NC Hwy 43 North, Greenville, North Carolina 27834 on **May 19, 2022**, at **2 P.M.**.

The major items of Work include:

- Constructing, testing, cleaning, drying, purging, and filling with gas a 4.0-mile, 4-inch PE natural gas pipeline;
- Tying in the new pipeline to the existing natural gas distribution system.

Bidders are advised that this contract contains provisions requiring the Contractor to document that sufficient good faith efforts have been made to provide equal opportunity for Minority and Women Enterprises to participate in the subcontracting and material supplier opportunities available under this contract.

The complete Bid Package will be posted and available at <http://www.guc.com/doing-business-with-us> for download.

The right is reserved to reject any or all Bids, to waive informalities, and to award Contract or Contracts which, in the opinion of the Owner, appear to be in its best interest. The right is reserved to hold any or all Bids for a period of sixty (60) days from the opening thereof.

COVID-19 Notification

Greenville Utilities Commission is committed to the health and safety of our customers and employees. We are taking the spread of COVID-19 very seriously and continue to monitor the latest Local, State, and Federal guidance.

Our offices are presently open to the public. We are receiving FedEx, UPS, US Mail.

GREENVILLE UTILITIES COMMISSION

(Owner)

Mr. F. Durward Tyson, Jr., P.E.

(Assistant Director of Gas Systems)

INTRODUCTION AND PROJECT DESCRIPTION

The Greenville Utilities Commission (GUC) is requesting Bids for the construction, testing, and gassing-up of the VOA Road Loop Pipeline. The proposed 4-inch ASTM D2513, 0.391-inch wall thickness, MDPE natural gas main is approximately 4.0 miles in length. The route of the proposed gas main ties into an existing gas main near the intersection of Stantonsburg Road and VOA Site C Road and follows VOA Site C Road to the north along the Right-of-Way, and ties into an existing gas main near the intersection of Lawrence Run Drive and VOA Site C Road. Construction will be within the NCDOT Right-of-Way or GUC Utility Easement as shown on plans. As designed, there is are (3) horizontal directional drill (HDDs) and the remainder of the construction is designed to be performed by a conventional open trench method. The new gas main is to be hydrostatically tested to 90 psig for a maximum allowable operating pressure (MAOP) of 60 psig. The Greenville Utilities Commission intends to operate the main at 60 psig.

The Contractor will be required to deliver a tested, cleaned, purged, and gassed-up pipeline. The Contractor shall make all tie-ins between the proposed VOA Road Loop Pipeline and the existing 4-inch PE natural gas pipeline. The Contractor shall coordinate the tie-ins of the proposed VOA Road Loop Pipeline and existing 4-inch PE natural gas pipelines with the Greenville Utilities Commission.

GENERAL REQUIREMENTS

Contractor’s bidding on the Work must have a minimum of five (5) years of experience constructing polyethylene natural gas mains and/or pipelines according to the requirements of Title 49, Part 192, and the project Plans and Specification. Contractor must have a minimum of five (5) years of experience in horizontal directional drilling with similar diameter polyethylene pipe, preferable in the geological region of the project.

The Owner shall provide all materials listed in the Bill of Materials contained in the drawings. The Contractor shall provide all other materials and equipment required for construction of the pipeline, fencing and asphalt paving; and for the restoration for the site following Construction.

SITE CONDITIONS

The terrain consists of gently rolling hills and low flat areas. There are wetlands, and several smaller streams; predominantly designed to be crossed by horizontal directional drilling. The existing road right-of-way (ROW) is cleared and may require some brush cutting and removal for construction to begin. Some minor clearing of mature growth and secondary growth timber will be required. The land surrounding the pipeline route and existing road ROW is predominantly farmland or wooded. Depending on the season and the rainfall, the site can be expected to be wet with a high-water table.

The site elevation is between approximately 79 feet above sea level (ASL) at the southern end of the gas main to approximately 56 feet above sea level (ASL) at the bottom of Pinelog Branch. The 100-year flood elevation at the site is 61.5 feet ASL.

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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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 which registers plan holders.

The Greenville Utilities Commission
Engineering and Operations Center
3355 NC Hwy 43 North
Greenville, North Carolina 27834

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **five** days of Owner's request, Bidder must submit the following information:

- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
- B. A written statement that Bidder is authorized to do business in the state where the Project is located.
- C. Bidder's state or other contractor license number, if applicable.
- D. Subcontractor and Supplier qualification information.
- E. Other required information regarding qualifications.
- F. **Proof of five (5) years of recent and current experience with similar natural gas main or pipeline projects constructed under the requirements of Title 49, Part 192, having similar sized MDPE and HDPE pipe, and including horizontal directional drilling length.**

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 **OPERATOR QUALIFICATIONS**

Successful Bidder will be required to meet the Greenville Utilities Commission Operator Qualification requirements for all covered tasks included in the Work under this Contract.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

- a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
- b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
- c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

- d. Technical Data contained in such reports and drawings.
 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings. **The Bidder will be responsible for the cost associated with making the copies available.**
 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- 5.03 *Site Visit and Testing by Bidders*
- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
 - B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
 - C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
 - D. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- 5.04 *Owner's Safety Program*
- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.
- 5.05 *Other Work at the Site*
- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the

Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder’s examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

Seth Anderson, P.E.
Rivers and Associates,
107 E. 2nd Street
Greenville, North Carolina 27858
Email: sanderson@riversandassociates.com

And Copied to:

F. Durward Tyson, Jr., P.E.
Greenville Utilities Commission
3355 NC Hwy 43 North
Greenville, North Carolina 27834
Fax: (252) 551-2048
Email: tysonfd@guc.com

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract

Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5 percent** of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a **certified check, bank money order, or a Bid bond** issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents. **Bid security must be at least 5% of the Bidder's maximum Bid price.**
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract 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, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or **to the end of the Bid Acceptance Period as indicated in Article 7 of the Bid**, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 **Deleted**
- 9.03 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of

material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 **Deleted**

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

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

- 11.04 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 and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

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

- 11.06 **The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.07A.**

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents. **Additional copies may be obtained from the Engineer.**

- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”

- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must 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 must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure. Bidder's state contractor license number must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- D. **Alternates to the Base Bid for unit price items shall replace the corresponding item in the Base Bid.**

13.02 Allowances

- A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

13.03 Price-Plus-Time Bids

- A. Deleted

ARTICLE 14—SUBMITTAL OF BID

14.01 **With each copy of the Bidding Documents, a Bidder is furnished one bound copy of the Bid Form, and all the attachments outlined in Article 2 of the Bid Form to be submitted. If provided by Addendum, an unbound copy of the Bid Form is to be completed and submitted with all the attachments outlined in Article 2 of the Bid Form.**

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must 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 must 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 must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

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

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 If within **72** hours after Bids are opened, **not including weekends and holidays legally recognized by the Owner**, 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, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

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

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 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 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether 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.

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

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

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any),

insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

- 21.01 The contractor shall prepare and provide to the Owner a sales tax report with all of the Contractor's invoices.

ARTICLE 23 - CONTRACTS TO BE ASSIGNED

- 23.01 No separate contracts for equipment or material procurement will be executed by the Owner. All materials and equipment not specifically mentioned as furnished by Owner shall be furnished by the Contractor awarded the Work.

ARTICLE 24—RETAINAGE

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

ARTICLE 25— PARTNERING

- 25.01 Owner does not intend to participate in a partnering process with Contractor(s).

ARTICLE 26—EQUAL OPPORTUNITY EMPLOYMENT

- 26.1 The Contractor's employment practices shall be in accordance with North Carolina G.S. 168, and the North Carolina Civil Rights Act of 1964.

- 26.2 Greenville Utilities Commission has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE) Program. Firms submitting a proposal are attesting that they also have taken affirmative action to ensure equality of opportunity in all aspects of employment, and to utilize M/WBE suppliers of materials and/or labor. Greenville Utilities Commission's (Owner's) policy requires its contractors to document that sufficient good faith efforts have been made to provide equal opportunity for Minority and Women's Business Enterprises (M/WBE) to participate in the subcontracting and material supplier opportunities available under this contract.
- 26.3 The Contractor shall review the requirements and guidelines, and complete the Affidavits set forth in the Special Instructions to Bidders included in SECTION D. The Special Instructions to Bidders must be completed and submitted with the Contractor's Proposal.

Special Instructions to Bidders

City of Greenville/Greenville Utilities Commission Minority and/or Women Business Enterprise (M/WBE) Program

GUC Construction Guidelines and Affidavits \$100,000 and above

These instructions shall be included with each bid solicitation.

City of Greenville/Greenville Utilities Commission Minority and/or Women Business Enterprise Program

\$100,000 and Above Construction Guidelines for M/WBE Participants

Policy Statement

It is the policy of the City of Greenville and Greenville Utilities Commission to provide minorities and women equal opportunity for participating in all aspects of the City’s and Utilities’ contracting and procurement programs, including but not limited to, construction projects, supplies and materials purchases, and professional and personal service contracts.

Goals and Good Faith Efforts

Bidders responding to this solicitation shall comply with the M/WBE program by making Good Faith Efforts to achieve the following aspiration goals for participation.

	GUC	
	MBE	WBE
Construction	7%	4%

Bidders shall submit M/WBE information with their bids on the forms provided. This information will be subject to verification by GUC prior to contract award. **As of July 1, 2009, contractors, subcontractors, suppliers, service providers, or M/WBE members of joint ventures intended to satisfy GUC M/WBE goals shall be certified by the NC Office of Historically Underutilized Businesses (NC HUB) only.** Firms qualifying as “WBE” for GUC’s goals must be designated as a “women-owned business” by the HUB Office. Firms qualifying as “MBE” for the GUC’s goals must be certified in one of the other categories (i.e.: Black, Hispanic, Asian American, American Indian, Disabled, or Socially and Economically Disadvantaged). Those firms who are certified as both a “WBE” and “MBE” may only satisfy the “MBE” requirement. A complete database of NC HUB certified firms may be found at <http://www.doa.nc.gov/hub/>. An internal database of firms who have expressed interest to do business with the City and GUC is available at www.greenvillencmwbe.org. However, the HUB status of these firms must be verified by the HUB database. GUC shall accept NCDOT certified firms on federally funded projects only. Please note: A contractor may utilize any firm desired. However, for participation purposes, all M/WBE vendors who wish to do business as a minority or a female must be certified by NC HUB.

The Bidder shall make good faith efforts to encourage participation of M/WBEs prior to submission of bids in order to be considered as a responsive bidder. Bidders are cautioned that even though their submittal indicates they will meet the M/WBE goal, they should document their good faith efforts and be prepared to submit this information, if requested.

The M/WBE’s listed by the Contractor on the **Identification of Minority/Women Business Participation** which are determined by the GUC to be certified shall perform the work and supply the materials for which they are listed unless the Contractors receive prior authorization from the GUC to perform the work with other forces or to obtain materials from other sources. If a contractor is proposing to perform all elements of the work with his own forces, he must be prepared to document evidence satisfactory to the owner of similar government contracts where he has self-performed.

The Contractor shall enter into and supply copies of fully executed subcontracts with each M/WBE or supply signed Letter(s) of Intent to the Project Manager after award of contract and prior to Notice to Proceed. Any amendments to subcontracts shall be submitted to the Project Manager prior to execution.

Instructions

The Bidder shall provide with the bid the following documentation:

Identification of Minority/Women Business Participation
(if participation is zero, please mark zero—Blank forms will be considered nonresponsive)

Affidavit A (if subcontracting)

OR

Identification of Minority/Women Business Participation
(if participation is zero, please mark zero—Blank forms will be considered nonresponsive)

Affidavit B (if self-performing; must attest that bidder does not customarily subcontract work on this type of project—includes supplies and materials)

Within 72 hours or 3 business days after notification of being the apparent low bidder who is subcontracting anything must provide the following information:

Affidavit C (if aspirational goals are met or are exceeded)

OR

Affidavit D (if aspirational goals are not met)

After award of contract and prior to issuance of notice to proceed:

Letter(s) of Intent or Executed Contracts

****With each pay request, the prime contractors will submit the Proof of Payment Certification, listing payments made to M/WBE subcontractors.**

*****If a change is needed in M/WBE Participation, submit a Request to Change M/WBE Participation Form. Good Faith Efforts to substitute with another M/WBE contractor must be demonstrated.**

Minimum Compliance Requirements:

All written statements, affidavits, or intentions made by the Bidder shall become a part of the agreement between the Contractor and the GUC for performance of contracts. Failure to comply with any of these statements, affidavits or intentions or with the minority business guidelines shall constitute a breach of the contract. A finding by the GUC that any information submitted (either prior to award of the contract or during the performance of the contract) is inaccurate, false, or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the GUC whether to terminate the contract for breach or not. In determining whether a contractor has made Good Faith Efforts, the GUC will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts.

Greenville Utilities Commission **AFFIDAVIT A** – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

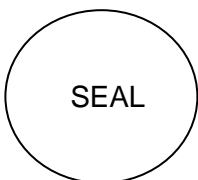
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority/Women Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority/women business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Greenville Utilities Commission --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

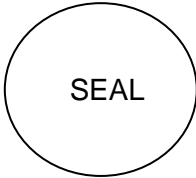
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

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

Notary Public _____

My commission expires _____

Greenville Utilities Commission - **AFFIDAVIT C** - Portion of the Work to be Performed by M/WBE Firms

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by M/WBE businesses as defined in GS143-128.2(g) and the COG/GUC M/WBE Plan sec. III is equal to or greater than 11% of the bidders total contract price, then the bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises and a minimum of _____% of the total dollar amount of the contract with women business enterprises. Minority/women businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*M/WBE Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic or Latino (**L**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**S**) Disabled (**D**)

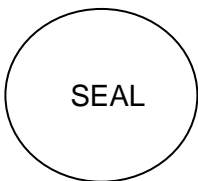
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with M/WBE Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Greenville Utilities Commission **AFFIDAVIT D – Good Faith Efforts**

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 11% participation by minority/women business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify
that on the _____

(Name of Bidder)

Project ID# _____ (Project Name) _____
Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises and a minimum of _____% of the total dollar amount of the contract with women business enterprises. Minority/women businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*M/WBE Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic or Latino (**L**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**S**) Disabled (**D**)

Examples of documentation required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

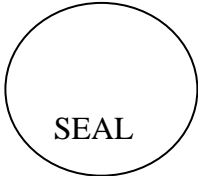
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with M/WBE Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

LETTER OF INTENT M/WBE Subcontractor Performance

Please submit this form or executed subcontracts with M/WBE firms after award of contract and prior to issuance of notice to proceed.

PROJECT: _____
(Project Name)

TO: _____
(Name of Prime Bidder/Architect)

The undersigned intends to perform work in connection with the above project as a:

____ Minority Business Enterprise ____ Women Business Enterprise

The M/WBE status of the undersigned is certified the NC Office of Historically Underutilized Businesses (required). ____ Yes ____ No

The undersigned is prepared to perform the following described work or provide materials or services in connection with the above project at the following dollar amount:

Work/Materials/Service Provided	Dollar Amount of Contract	Projected Start Date	Projected End Date

(Date)

(Address)

(Name & Phone No. of M/WBE Firm)

(Name & Title of Authorized Representative of M/WBE)

(Signature of Authorized Representative of M/WBE)

REQUEST TO CHANGE M/WBE PARTICIPATION

(Submit changes only if notified as apparent lowest bidder, continuing through project completion)

Project: _____

Bidder or Prime Contractor: _____

Name & Title of Authorized Representative: _____

Address: _____ **Phone #:** _____

_____ **Email Address:** _____

Total Contract Amount (including approved change orders or amendments): \$ _____

Name of subcontractor: _____

Good or service provided: _____

Proposed Action:

Replace subcontractor

Perform work with own forces

For the above actions, you must provide one of the following reasons (Please check applicable reason):

The listed MBE/WBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract.

The listed MBE/WBE is bankrupt or insolvent.

The listed MBE/WBE fails or refuses to perform his/her subcontract or furnish the listed materials.

The work performed by the listed subcontractor is unsatisfactory according to industry standards and is not in accordance with the plans and specifications; or the subcontractor is substantially delaying or disrupting the progress of the work.

If replacing subcontractor:

Name of replacement subcontractor: _____

The M/WBE status of the contractor is certified by the NC Office of Historically Underutilized Businesses (required). ___Yes ___No

Dollar amount of original contract \$ _____

Dollar amount of amended contract \$ _____

Other Proposed Action:

___ Increase total dollar amount of work

___ Add additional subcontractor

___ Decrease total dollar amount of work

___ Other

Please describe reason for requested action: _____

If adding additional subcontractor:*

The M/WBE status of the contractor is certified by the NC Office of Historically Underutilized Businesses (required).___Yes ___No

**Please attach Letter of Intent or executed contract document*

Dollar amount of original contract \$ _____

Dollar amount of amended contract \$ _____

Interoffice Use Only:

Approval ___Y ___N

Date _____

Signature _____

Pay Application No. _____ Purchase Order No. _____

Proof of Payment Certification

M/WBE Contractors, Suppliers, Service Providers

Project Name: _____

Prime Contractor: _____

Current Contract Amount (including change orders): \$_____

Requested Payment Amount for this Period: \$_____

Is this the final payment? Yes No

Firm Name	M/WBE Category*	Total Amount Paid from this Pay Request	Total Contract Amount (including changes)	Total Amount Remaining

*Minority categories: Black, African American (**B**), Hispanic or Latino (**L**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**S**) Disabled (**D**)

Date: _____

Certified By: _____

Name

Title

Signature

BID FORM
GCP-10112 VOA Site C Road Gas Improvements

For the
Greenville Utilities Commission of the City of Greenville, North Carolina

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

F. Durward Tyson, Jr., P.E.

Greenville Utilities Commission

3355 NC Hwy 43 North

Greenville, North Carolina 27834

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Proposed Suppliers;
- D. Evidence of authority to do business in the state of the Project;
- E. Contractor's license number as evidence of Bidder's State Contractor's License;
- F. Required Bidder Qualification Statement with supporting data; and

G. All required MBE documentation:

In accordance with GS 143-128.2(c), Bidder shall identify on its bid the minority businesses that it will use on the project and the total dollar value of the bid that will be performed by the minority businesses.

Bidder shall list the good faith efforts made to solicit participation in Affidavit A.

A Bidder that will perform all of the work with its own workforce may submit an Affidavit B to that effect in lieu of the Affidavit A required above.

- 1. Identification of Minority Business Participation (MB-1)**
- 2. Affidavit A, Listing of Good Faith Efforts (MB-2)**
- 3. Affidavit B, Intent to Perform Contract with Own Workforce (MB-3)**

ARTICLE 3—BASIS OF BID

3.01 *Bid*

A. Bidder will complete the Work in accordance with the Contract Documents for the following price(s) **on the Bid Schedule**:

	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1001	Mobilization	EA	1	\$	\$
2001	Install 4" PE pipe by conventional trenching at 3' to 5' depth.	LF	18,725	\$	\$
2002	Install 4" PE pipe by conventional trenching at over 5' depth.	LF	260	\$	\$
2003	Install 4" PE pipe by horizontal directional drilling	LF	841	\$	\$
2004	Install 4" HDPE pipe by horizontal directional drilling	LF	700	\$	\$
2005	Install 4" PE pipe by dry bore	LF	750	\$	\$
3001	Install 4" PE ball valve assemblies	EA	4	\$	\$
3002	Install 6" Valve Box	EA	24	\$	\$
3003	Tie-in to existing 4" PE main at Stantonsburg Road	LS	1	\$	\$
3004	Tie-in to existing 4" PE main at Lawrence Run	LS	1	\$	\$
5001	Pigging, testing & gas-up of pipeline	LS	1	\$	\$
6001	Restoration of pipeline ROW (seed, mulch, tack, erosion control)	AC	4	\$	\$
7001	Install pipeline markers	EA	41	\$	\$
7002	Install locating stations	EA	19	\$	\$
Total of All Unit Price Bid Items					\$

- B. All specified cash allowance(s) are included in the price(s) set forth in the **Bid Schedule**, and have been computed in accordance with Paragraph 13.02 of the General Conditions.
- C. **Unit Prices have been computed in accordance with Paragraph 13.03 of the General Conditions.**
- D. Bidder acknowledges that:
 - 1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
 - 2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 5—DELETED**ARTICLE 6—DELETED****ARTICLE 7—TIME OF COMPLETION**

- 7.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 7.02 **Deleted**
- 7.03 **Deleted**
- 7.04 Bidder accepts the provisions of the Agreement as to liquidated damages **in the event of failure to complete the Work within the Contract Times.**

ARTICLE 8—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

- 8.01 *Bid Acceptance Period*
 - A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 8.02 *Instructions to Bidders*
 - A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.
- 8.03 *Receipt of Addenda*
 - A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 9—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

9.01 Bidder’s Representations

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 8. Bidder 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 Bidding Documents.
 9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

9.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

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

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

Bidder's Contractor License No.: (if applicable) _____

BID BOND (PENAL SUM FORM)

<p>Bidder Name: Address <i>(principal place of business)</i>:</p>	<p>Surety Name: Address <i>(principal place of business)</i>:</p>
<p>Owner Name: Address <i>(principal place of business)</i>:</p>	<p>Bid Project <i>(name and location)</i>: Bid Due Date:</p>
<p>Bond Penal Sum: Date of Bond:</p>	
<p>Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Bidder</p>	<p>Surety</p>
<p>_____</p> <p><i>(Full formal name of Bidder)</i></p>	<p>_____</p> <p><i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>By: _____</p> <p style="text-align: center;"><i>(Signature) (Attach Power of Attorney)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i></p>	

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

**IRAN DIVESTMENT ACT CERTIFICATION REQUIRED BY
NORTH CAROLINA SESSION LAW 2015-118 AND
CHAPTER 147, ARTICLE 6E OF THE NORTH CAROLINA GENERAL STATUTES**

Name of Contractor: _____

As of the date listed below, the Contractor named above is not listed on the Final Divestment List created by the State Treasurer pursuant to North Carolina Session Law 2015-118 and Chapter 147, Article 6E of the North Carolina General Statutes.

The undersigned hereby certifies that he or she is authorized by the Contractor named above to make the foregoing statement.

Signature

Date

Printed Name

Title

Notes to persons signing this form:

North Carolina Session Law 2015-118 and Chapter 147, Article 6E of the North Carolina General Statutes requires this certification for bids or contracts with the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina. The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

North Carolina Session Law 2015-118 and Chapter 147, Article 6E of the North Carolina General Statutes also requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and will be updated every 180 days.

Letter of Compliance to E-Verify for Greenville Utilities Commission

1. I have submitted a bid for contract or desire to enter into a contract with the Greenville Utilities Commission;
2. As part of my duties and responsibilities pursuant to said bid and/or contract, I affirm that I am aware of and in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

3. ____ After hiring an employee to work in the United States I verify the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or
4. ____ I employ less than fifteen (15) employees in the State of North Carolina.

5. As part of my duties and responsibilities pursuant to said bid and/or contract, I affirm that to the best of my knowledge and subcontractors employed as a part of this bid and/or contract, are in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

6. ____ After hiring an employee to work in the United States the subcontractor verifies the work authorization of said employee through E-Verify and retains the record of the verification of work authorization while the employee is employed and for one year thereafter; or
7. ____ Employ less than fifteen (15) employees in the State of North Carolina.

Specify subcontractor: _____

_____ (Company Name)

By: _____ (Typed Name)

_____ (Authorized Signatory)

_____ (Title)

_____ (Date)

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business’s organizational structure:

Form of Business:	<input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation		
<input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies:			
1.			
2.			
3.			
Provide a separate Qualification Statement for each Joint Venturer.			
Date Business was formed:		State in which Business was formed:	
Is this Business authorized to operate in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending	

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			

1.04 Provide information regarding the Business’s officers, partners, and limits of authority.

Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business’s Diverse Business Certification, if any. Provide evidence of current certification.

Certification	Certifying Agency	Certification Date
<input type="checkbox"/> Disadvantaged Business Enterprise		
<input type="checkbox"/> Minority Business Enterprise		
<input type="checkbox"/> Woman-Owned Business Enterprise		
<input type="checkbox"/> Small Business Enterprise		
<input type="checkbox"/> Disabled Business Enterprise		
<input type="checkbox"/> Veteran-Owned Business Enterprise		
<input type="checkbox"/> Service-Disabled Veteran-Owned Business		
<input type="checkbox"/> HUBZone Business (Historically Underutilized) Business		
<input type="checkbox"/> Other		
<input type="checkbox"/> None		

ARTICLE 4—SAFETY

4.01 Provide information regarding Business’s safety organization and safety performance.

Name of Business’s Safety Officer:		
Safety Certifications		
Certification Name	Issuing Agency	Expiration

4.02 Provide Worker’s Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

ARTICLE 5—FINANCIAL

5.01 Provide information regarding the Business’s financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:		
Business address:		
Date of Business’s most recent financial statement:		<input type="checkbox"/> Attached
Date of Business’s most recent audited financial statement:		<input type="checkbox"/> Attached
Financial indicators from the most recent financial statement		
Contractor’s Current Ratio (Current Assets ÷ Current Liabilities)		
Contractor’s Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)		

ARTICLE 6—SURETY INFORMATION

6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is surety listed in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 7—INSURANCE

7.01 Provide information regarding Business’s insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider		Type of Policy (Coverage Provided)	
Are providers licensed or authorized to issue policies in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does provider have an A.M. Best Rating of A-VII or better?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

8.02 Provide information regarding the Business’s previous contracting experience.

Years of experience with projects like the proposed project:		
As a general contractor:		As a joint venturer:
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:		
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been barred from contracting by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Provide full details in a separate attachment if the response to any of these questions is Yes.		

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business’s experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business’s key leaders as well.

ARTICLE 9—REQUIRED ATTACHMENTS

9.01 Provide the following information with the Statement of Qualifications:

- A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
- B. Diverse Business Certifications if required by Paragraph 3.01.
- C. Certification of Business’s safety performance if required by Paragraph 4.02.
- D. Financial statements as required by Paragraph 5.01.

- E. Attachments providing additional information as required by Paragraph 8.02.
- F. Schedule A (Current Projects) as required by Paragraph 8.03.
- G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
- H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
- I. Additional items as pertinent.

This Statement of Qualifications is offered by:

Business: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

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

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address: _____

Phone: _____

Email: _____

Schedule A—Current Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule C—Key Individuals

Project Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Project Superintendent			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

Safety Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Quality Control Manager			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

NOTICE OF AWARD

Date of Issuance:		
Owner:	Greenville Utilities Commission	Owner's Project No.:
Engineer:	Rivers and Associates, Inc.	Engineer's Project No.:
Project:	GCP-10112 VOA Site C Road Gas Improvements	
Contract Name:	GCP-10112 VOA Site C Road Gas Improvements	
Bidder:		
Bidder's Address:		

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

[Describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is \$**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[Number of copies sent] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[number of copies sent]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): **[Describe other conditions that require Successful Bidder's compliance]**

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

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **Greenville Utilities Commission**

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

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

This Agreement is by and between **Greenville Utilities Commission** (“Owner”) and **[name of contracting entity]** (“Contractor”).

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

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **GCP-10112 VOA Site C Road Gas Improvements**

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

- A. The Greenville Utilities Commission (GUC) is requesting Bids for the construction, testing, and gas-sing-up of the VOA Road Loop Pipeline. The proposed 4-inch ASTM D2513, 0.391-inch wall thickness, MDPE and HDPE natural gas main is approximately 4.0 miles in length. The route of the proposed gas main ties into an existing gas main near the intersection of Stantonsburg Road and VOA Site C Road and follows VOA Site C Road to the north along the Right-of-Way, and ties into an existing gas main near the intersection of Lawrence Run Drive and VOA Site C Road. Construction will be within NCDOT Right-of-Way and existing utility easements. As designed, there is are (3) horizontal directional drill (HDDs) and the remainder of the construction is designed to be performed by a conventional open trench method. The new gas main is to be hydrostatically tested to 90 psig for a maximum allowable operating pressure (MAOP) of 60 psig. The Greenville Utilities Commission intends to operate the main at 60 psig.
- B. The CONTRACTOR will be required to deliver a tested, cleaned, purged, and gassed-up pipeline. The CONTRACTOR shall make all tie-ins between this project and existing facilities. The CONTRACTOR shall coordinate all tie-ins with the Greenville Utilities Commission.

ARTICLE 3—ENGINEER

3.01 The Owner has retained **Rivers & Associates, Inc.** (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.03 Once the Notice of Award has been issued, the Owner may assume all or part of the responsibilities of the Engineer and Resident Project Representative.

ARTICLE 4—CONTRACT TIMES

4.01 Time is of the Essence

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

4.02 Contract Times: Days

- A. The Work will be substantially complete within **120** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **120** days after the date when the Contract Times commence to run.

4.04 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
 1. *Substantial Completion:* Contractor shall pay Owner **\$500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$500** for each day that expires after such time until the Work is completed and ready for final payment.
 3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.
- C. **Deleted**

4.05 Deleted

ARTICLE 5—CONTRACT PRICE

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

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

ARTICLE 6—PAYMENT PROCEDURES6.01 *Submittal and Processing of Payments*

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

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **25th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

- a. **95** percent of the value of the Work completed (with the balance being retainage).

- 1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, **and Contractor has provided written consent of surety**, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage. **The 50 percent of work completed shall be based on Contractor's pay request with off-site materials excluded and a maximum of 20 percent of on-site stored materials included;** and

- b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage) **but delivered and suitably stored in a location and manner agreed to in writing and pursuant to Paragraph 15.01.B.2 of the General Conditions.**

- B. Upon Substantial Completion **of the entire construction to be provided under the construction Contract Documents**, Owner shall pay an amount sufficient to increase total payments to Contractor to **100** percent of the Work completed, less such amounts set off by

This document is a Modified version of EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).

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Modified to include RD edits from RUS Bulletin 1780-26 (6/16/2020).

Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price **as recommended by Engineer** in accordance with Paragraph 15.06 of the General Conditions, **less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages.**

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the **maximum legal rate.**

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
1. This Agreement.
 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 3. General Conditions.
 4. Supplementary Conditions.
 5. Specifications as listed in the table of contents of the project manual.
 6. Drawings (not attached but incorporated by reference) consisting of **[number]** sheets with each sheet bearing the following general title: **[title on Drawings]**.
 7. Addenda (numbers **[number]** to **[number]**, inclusive).
 - a. **Contractor's Bid (pages ___ to ___, inclusive).**
 - b. **Documentation submitted by Contractor prior to Notice of Award (pages ___ to ___, inclusive).**
 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.

- c. Change Orders.
- d. Field Orders.
- B. The Contract Documents listed in Paragraph 7.01.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 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 - 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 - 5. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 - 6. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - 7. 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.

8. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
9. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
10. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 **Deleted**

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

This Agreement will be effective on [indicate date on which Contract becomes effective] (which is the Effective Date of the Contract).

Owner:

Contractor:

(typed or printed name of organization)

(typed or printed name of organization)

By: _____
(individual's signature)

By: _____
(individual's signature)

Date: _____
(date signed)

Date: _____
(date signed)

Name: _____
(typed or printed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

(If [Type of Entity] is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

Address for giving notices:

Designated Representative:

Designated Representative:

Name: _____
(typed or printed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Address:

Phone: _____

Phone: _____

Email: _____

Email: _____

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

License No.: _____
(where applicable)

State: _____

NOTICE TO PROCEED

Owner: Greenville Utilities Commission Owner's Project No.: _____
 Engineer: Rivers and Associates, Inc. Engineer's Project No.: _____
 Contractor: _____ Contractor's Project No.: _____
 Project: GCP-10112 VOA Site C Road Gas Improvements
 Contract Name: GCP-10112 VOA Site C Road Gas Improvements
 Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement: **[Select one of the following two alternatives, insert dates or number of days, and delete the other alternative.]**

The date by which Substantial Completion must be achieved is **[date for Substantial Completion, from Agreement]**, and the date by which readiness for final payment must be achieved is **[date for readiness, from Agreement]**.

[or]

The number of days to achieve Substantial Completion is **[number of days, from Agreement]** from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of **[date, calculated from commencement date above]**; and the number of days to achieve readiness for final payment is **[number of days, from Agreement]** from the commencement date of the Contract Times, resulting in a date for readiness for final payment of **[date, calculated from commencement date above]**.

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

[Note any access limitations, security procedures, or other restrictions]

Owner: Greenville Utilities Commission
 By (signature): _____
 Name (printed): _____
 Title: _____
 Date Issued: _____
 Copy: Engineer

PAYMENT BOND

<p>Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i>: [Address of Contractor’s principal place of business]</p>	<p>Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i>: [Address of Surety’s principal place of business]</p>
<p>Owner Name: [Full formal name of Owner] Mailing address <i>(principal place of business)</i>: [Address of Owner’s principal place of business]</p>	<p>Contract Description <i>(name and location)</i>: [Owner’s project/contract name, and location of the project] Contract Price: [Amount, from Contract] Effective Date of Contract: [Date, from Contract]</p>
<p>Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

PERFORMANCE BOND

<p>Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i>: [Address of Contractor’s principal place of business]</p>	<p>Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i>: [Address of Surety’s principal place of business]</p>
<p>Owner Name: [Full formal name of Owner] Mailing address <i>(principal place of business)</i>: [Address of Owner’s principal place of business]</p>	<p>Contract Description <i>(name and location)</i>: [Owner’s project/contract name, and location of the project] Contract Price: [Amount from Contract] Effective Date of Contract: [Date from Contract]</p>
<p>Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER ABC Insurance Agency Street City, State, Zip	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED XYZ Contractor Street City, State, Zip	INSURER A: Name of Insurance Co	
	INSURER B: Name of Insurance Co	
	INSURER C: Name of Insurance Co	
	INSURER D: Name of Insurance Co	
	INSURER E:	

COVERAGES

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

INSR LTR	ADP L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Explosion, Collapse Hazard <input checked="" type="checkbox"/> Underground Hazard GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC				EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADY INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
B		AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
C		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ \$ \$
D		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
		OTHER				

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Coverage applies to (Project Name and Contract No.). Certificate holder is named as Additional Insured, per attached ISO Form CG 20 10 11-85 or equivalent. Waiver of Subrogation is added by endorsement.

CERTIFICATE HOLDER

Contractor/Owner/Engineer
 Street
 City, State, Zip

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

CERTIFICATE OF FINANCE OFFICER

Provisions for the payment of the monies to fall due under this agreement has been made by appropriation duly made or by bonds or notes duly authorized, as required by the "Local Government Budget and Fiscal Control Act".

Finance Officer

Date

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____,
the duly authorized and acting legal representative of _____,
_____ do hereby certify as follows:

I have examined the attached Contract(s) and Performance and Payment Bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

Date _____

Contractor's Application for Payment

Owner: _____	Owner's Project No.: _____
Engineer: _____	Engineer's Project No.: _____
Contractor: _____	Contractor's Project No.: _____
Project: _____	
Contract: _____	
Application No.: _____	Application Date: _____
Application Period: From _____ to _____	

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ - Work Completed =	\$	-
b. _____ X \$ _____ - Stored Materials =	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Amount due this application	\$	-
9. Balance to finish, including retainage (Line 3 - Line 4 + Line 5.c)	\$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____

Signature: _____ **Date:** _____

Recommended by Engineer	Approved by Owner
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____
Approved by Funding Agency	
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____
 Engineer: _____
 Contractor: _____
 Project: _____
 Contract: _____

Owner's Project No.: _____
 Engineer's Project No.: _____
 Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Original Contract											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
Original Contract Totals					\$ -		\$ -	\$ -	\$ -		\$ -

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____
 Engineer: _____
 Contractor: _____
 Project: _____
 Contract: _____

Owner's Project No.: _____
 Engineer's Project No.: _____
 Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (I / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
Change Order Totals					\$ -		\$ -	\$ -	\$ -		\$ -
Original Contract and Change Orders											
Project Totals					\$ -		\$ -	\$ -	\$ -		\$ -

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	Greenville Utilities Commission	Owner's Project No.:
Engineer:	Rivers and Associates, Inc.	Engineer's Project No.:
Contractor:		Contractor's Project No.:
Project:	GCP-10112 VOA Site C Road Gas Improvements	
Contract Name:	GCP-10112 VOA Site C Road Gas Improvements	

This Preliminary Final Certificate of Substantial Completion applies to:

All Work The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

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

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

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

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

Amendments to Owner's Responsibilities: None As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: None As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

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

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *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.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *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.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *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 of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means 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, means 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, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. 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 Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *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 the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

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

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

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

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

B. *Resolving Discrepancies*

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

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

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

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

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

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

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

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
- a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

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

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is 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; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. 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 all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *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 maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. 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 will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

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

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

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

7.09 *Permits*

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

7.10 *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.

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

7.12 *Record Documents*

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

7.13 *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.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. 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.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. 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.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, 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.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. Use or occupancy of the Work or any part thereof by Owner;
 5. Any review and approval of a Shop Drawing or Sample submittal;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will 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.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. 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.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

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

- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
 - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

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

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

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

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will 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 Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

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

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

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

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will 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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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, which 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 will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of 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, 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.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed 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 builder's risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. 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.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

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

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

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

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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 with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

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

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

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

14.05 *Uncovering Work*

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

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

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

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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

15.02 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all 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). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. 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.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

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

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

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

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

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

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Assignment of Contract*

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

18.09 *Successors and Assigns*

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

18.10 *Headings*

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

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

A. **Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:**

Geotechnical Data Report (GDR) — The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner in support of the Geotechnical Baseline Report. The GDR's content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

Operator Qualifications (OQ) – Each operator of a natural gas system must prepare a written Operator Qualification Plan in accordance with the criteria set forth in Title 49, CFR Part 192, Subpart N. The Greenville Utilities Commission Gas Department (Owner) requires contractors that perform covered tasks on its system that are identified in the Gas Department's Operator Qualification Plan to provide their own Operator Qualification Plan and qualification records of individuals that will perform covered tasks on the Work included under this Contract. The Owner will review the Contractor's OQ plan for compliance with the requirements of §192.805, and review the Contractor's OQ records for compliance with §192.807.

ARTICLE 2—PRELIMINARY MATTERS

SC-NONE

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

SC-NONE

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

SC-NONE

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.01 Availability of Lands

A. Add as Paragraph 5.01.D by inserting the following:

Owner’s rights to install the VOA Site C Road Gas Improvements are provided through Grants of Easement from the property owners and encroachment agreements with jurisdictional authorities. Owner shall furnish the site for the pipeline to the Contractor along with such conditions and requirements for carrying out the Work on the site. The Contractor shall honor all conditions imposed on the Owner for use of site.

SC-5.03 Subsurface and Physical Conditions

B. Delete Paragraphs 5.03 of the General Conditions in its entirety and replace with the following provisions:

SC/GBR-5.03 Subsurface and Physical Conditions

C. Geotechnical Data Report:

1. This Contract contains a Geotechnical Data Report (GDR), identified as follows: “Geotechnical Engineering Data Report, VOA Site C Road Gas Line Improvements Greenville, Pitt County, North Carolina”, December 13, 2021 prepared by Terracon Consultants, Inc. Winterville, North Carolina.
2. The GDR is incorporated as a Contract Document. The GDR is to be used in conjunction with other Contract Documents, including the Drawings and Specifications.
3. The GDR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations. These may include ground, geological, groundwater, and other subsurface geotechnical conditions.
4. The GDR conditions shall be used to assist in the administration of the Contract’s differing site conditions clause at locations where subsurface conditions were determined in the GDR.
5. The GDR conditions shall not be used to make differing site conditions determinations at locations that have not been evaluated in the GDR.
6. The descriptions of subsurface conditions provided in the GDR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other

consultant warrants or guarantees that actual subsurface conditions will be as described in the GDR, nor is the GDR intended to warrant or guarantee the use of specific means or methods of construction.

7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction.
8. The GBR shall not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

SC-5.04 Differing Subsurface and Physical Conditions

- A. Delete Paragraphs 5.04 of the General Conditions in its entirety and replace with the following provisions:

SC/GBR-5.04 Differing Subsurface or Physical Conditions

- A. Notice: If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:
 1. differs materially from conditions shown or indicated in the GDR, to the extent the GDR is inapplicable; or
 2. differs materially from conditions shown or indicated in Contract Documents other than the GDR, to the extent the GDR are inapplicable; or
 3. to the extent the GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 4. to the extent the GDR is inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or
 5. to the extent the GDR is inapplicable, 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 conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. Engineer's Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC/GBR 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption or continuation of Work in connection

Exhibit A—Foreseeable Bad Weather Days Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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Modified to include RD edits from RUS Bulletin 1780-26 (6/16/2020).

with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. Owner's Statement to Contractor Regarding Site Condition:

After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. Possible Price and Times Adjustments:

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph SC/GBR 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph SC/GBR 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount

or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner’s issuance of the Owner’s written statement to Contractor regarding the subsurface or physical condition in question.

SC-5.06 Hazardous Environmental Conditions

- A. SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:
 - A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
 - B. Not Used.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:
1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
 2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).
 3. Performance and payment bonds shall cover all work of the contract including plantings and landscaping.

6.02 *Insurance—General Provisions*

- SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:
1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.

6.03 *Contractor’s Insurance*

- SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:
- E. *Workers’ Compensation and Employer’s Liability:* Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance, including, as applicable, United States Longshoreman and Harbor Workers’ Compensation Act (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers’ Compensation and Related Policies	Policy limits of not less than:
Workers’ Compensation	
State	Statutory

Workers' Compensation and Related Policies	Policy limits of not less than:
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Each accident	\$500,000
Each employee	\$500,000
Policy limit	\$500,000

The Contractor will provide an endorsement to the Contractor's Workers Compensation and Employer's Liability Insurance waiving all rights of subrogation by the Contractor's insurance carrier against the Owner and Engineer.

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and

CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
6. Any limitation or exclusion based on the nature of Contractor’s work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$1,000,000
Each Accident	\$1,000,000

Automobile Liability	Policy limits of not less than:
Property Damage	
Each Accident	\$1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

- K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer’s liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy’s policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of **\$3,000,000** after accounting for partial attribution of its limits to underlying policies, as allowed above.

6.04 *Builder’s Risk and Other Property Insurance*

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- F. *Builder’s Risk Requirements:* The builder’s risk insurance must:
1. be written on a builder’s risk “all risk” policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).
 - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

- b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
 4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 5. extend to cover damage or loss to insured property while in transit.
 6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
 7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
 8. include performance/hot testing and start-up, if applicable.
 9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
 10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
 - a. **None**

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- H. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

7.03 Labor; Working Hours

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be **7:00 a.m. to 6:00 p.m.**
2. Regular Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, or as directed by the District Engineer.
3. Owner's legal holidays are **New Year’s Day, Martin Luther King Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and Christmas Day.**

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

- D. **Contractor** shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer’s services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-7.05.A Add the following language to Paragraph 7.05.A:

Request for Engineer’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of the Agreement must be received by the Engineer at least 15 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as “or equal” unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of paragraph 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed “or equal” item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

SC-7.07.A Amend by adding the following to the end of the paragraph:

The total amount of work subcontracted by the Contractor shall not exceed fifty percent of the Contract price without prior approval from the Owner.

7.10 Taxes

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

B. Contractor and his Subcontractors shall maintain accurate records of payment of N.C. state sales tax on materials, supplies, fixtures, and equipment, which become a part of the work. Contractor shall submit with the application for payment a certified statement

showing sales tax paid by Contractor and Subcontractors. Certified statement shall list suppliers' invoices showing invoice number, amount paid, tax paid, date and county paid. Sales tax records and certified statements shall be in such form and substance as to meet the requirements of the N.C. State Department of Revenue in the matter of the Owner obtaining a refund from the State of North Carolina of sales taxes paid by Contractor and his Subcontractors.

SC-7.12.A Amend paragraph by adding the following after "written interpretations and clarifications,":

Manufacturers' Certifications,

SC-7.12.A Add the following to Paragraph 7.12.A:

Refer to submittals for detailed requirements concerning record documents.

SC-7.20 Add the following new section after Paragraph 7.19.G:

7.20 *E-Verify and Iran Divestment*

- A. In accordance with North Carolina General Statute 143-133.3, Contractor and Contractor's subcontractors shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (i.e. Contractors and subcontractors must use E-Verify).
- B. By submitting a bid and executing the Agreement with the OWNER, CONTRACTOR shall be certifying that the CONTRACTOR is not listed on the Final Divestment List created by the State Treasurer pursuant to North Carolina Session Law 2015-118 and Chapter 147, Article 6E of the North Carolina General Statutes. Any agreement between CONTRACTOR and OWNER shall not be assignable to any entity on the Final Divestment List.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

SC-8.01 Add the following to paragraph 8.01.A:

Refer to the Section 01010 Project Requirements for work at the site by Contractors, Owner, and others.

8.02 *Coordination*

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

- C. Owner intends to contract with others for the performance of other work at or adjacent to the Site.
 - 1. **The General Contractor** shall have authority and responsibility for coordination of the various contractors and work forces at the Site;

Exhibit A—Foreseeable Bad Weather Days Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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2. The following specific matters are to be covered by such authority and responsibility: **scheduling delivery of materials, storage of materials, sequencing of construction involving different trades, resolving interface issues between trades, scheduling testing, etc.**
3. The extent of such authority and responsibilities is: **full authority for all aspects that do not impact the design or function of the Work.**

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.13 Owner’s Site Representative

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 Owner’s Site Representative

- A. Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative will be the Owner.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.03 Resident Project Representative

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

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 Cost of the Work

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work

provisions of this Contract is the most current edition of **Rental Rate Blue Book for Construction Equipment**.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

For purposes of this paragraph, “small tools and hand tools” means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

SC-13.02.C – Delete paragraph in its entirety and insert “Deleted”.

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to 10 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor’s unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor’s costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

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

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01.B.2 Add the following language at the end of Paragraph 15.01.B.2:

Payment for stored materials and equipment will only be made for major items of materials or equipment. Payment for such materials and equipment shall be based only upon the

actual cost of the materials and equipment to Contractor and shall not include any overhead or profit to Contractor. The Contractor shall include a cumulative monthly summary of all materials stored on site in accordance with the form shown in EJCDC C-620. As materials are entered into construction, the last column will be reduced correspondingly. The total of the last column will be paid as materials stored on site, less retainage.

The Contractor shall provide sales tax reports in the form required by the Owner with each Application for Payment.

The Contractor shall note the requirements for record drawings with each application for payment listed in the Specification section entitled SUBMITTALS.

SC-15.01.B.4 – Add the following language at the end of paragraph:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage or invest the retainage for the benefit of the Contractor.

SC-15.01.B.5 – Add new paragraph immediately after Paragraph 15.01.B.4:

5. The Application for Payment form to be used on this Project is EJCDC® C-620.

15.02 *Contractor's Warranty of Title*

SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.04 *Partial Use or Occupancy*

SC-15.04 Add the following new Paragraph 5 after 15.04.A.4:

5. Such taking possession or use will not be deemed an acceptance of any work not completed in accordance with the Contract Documents. Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the contract time or change in the contract price. Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and

any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a change order.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 Arbitration

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 Arbitration

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The Arbitrator(s) must be licensed Engineers, Contractors, Attorneys, or Construction Managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The Arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate Attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the Arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be

Exhibit A—Foreseeable Bad Weather Days Supplement to the Supplementary Conditions.

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required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.

- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an Arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

17.03 *Attorneys' Fees*

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

No suggested Supplementary Conditions in this Article.

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner:	Greenville Utilities Commission	Owner's Project No.:
Engineer:	Rivers and Associates, Inc.	Engineer's Project No.:
Contractor:		Contractor's Project No.:
Project:	GCP-10112 VOA Site C Road Gas Improvements	
Contract Name:	GCP-10112 VOA Site C Road Gas Improvements	
Date Issued:		Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

Non-agreement on pricing of proposed change. Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price:	\$ _____	[increase] [decrease] [not yet estimated].
Contract Time:	_____ days	[increase] [decrease] [not yet estimated].

Basis of estimated change in Contract Price:

Lump Sum Unit Price Cost of the Work Other

Recommended by Engineer

Authorized by Owner

By: _____

Title: _____

Date: _____

CHANGE ORDER NO.: [Number of Change Order]

Owner:	Greenville Utilities Commission	Owner's Project No.:
Engineer:	Rivers and Associates, Inc.	Engineer's Project No.:
Contractor:		Contractor's Project No.:
Project:	GCP-10112 VOA Site C Road Gas Improvements	
Contract Name:	GCP-10112 VOA Site C Road Gas Improvements	
Date Issued:		Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	Change in Contract Times [State Contract Times as either a specific date or a number of days]
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____	[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: \$ _____	[Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)

Accepted by Contractor

By: _____

Title: _____

Date: _____

Authorized by Owner

Approved by Funding Agency (if applicable)

By: _____

Title: _____

Date: _____

FIELD ORDER NO.: [Number of Field Order]

Owner:	Greenville Utilities Commission	Owner's Project No.:
Engineer:	Rivers and Associates, Inc.	Engineer's Project No.:
Contractor:		Contractor's Project No.:
Project:	GCP-10112 VOA Site C Road Gas Improvements	
Contract Name:	GCP-10112 VOA Site C Road Gas Improvements	
Date Issued:		Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

TERMS AND CONDITIONS

1.0 TAXES

No taxes shall be included in any bid prices. GUC is exempt from Federal Excise Tax. GUC is not exempt from North Carolina state sales and use tax or, if applicable, Pitt County sales and use tax. Such taxes shall be shown as a separate item on the invoice.

2.0 INVOICES

It is understood and agreed that orders will be shipped at the established contract prices and quantities in effect on dates orders are placed. Invoicing at variance with this provision may subject the contract to cancellation. Applicable North Carolina sales tax shall be invoiced as a separate line item. All invoices must bear the GUC purchase order number. Mail all invoices to Greenville Utilities Commission, Finance Department, P. O. Box 1847, Greenville, NC 27835-1847.

3.0 PAYMENT TERMS

Payments for equipment, materials, or supplies will be made after the receipt and acceptance of the equipment, materials, or supplies and after submission of a proper invoice. GUC's normal payment policy is thirty (30) days. GUC will not be responsible for any goods delivered without a purchase order having been issued. Payment will be made in U. S. currency only.

4.0 AFFIRMATIVE ACTION

The Provider will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without discrimination by reason of race, color, religion, sex, national origin, or physical handicap.

5.0 SPECIFICATIONS

Any deviation from specifications must be clearly pointed out, otherwise, it will be considered that items offered are in strict compliance with specifications, and the Provider will be held responsible. Deviations must be explained in detail. **The Provider shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable.**

6.0 INFORMATION AND DESCRIPTIVE LITERATURE

Providers are to furnish all information requested. Further, as may be specified elsewhere, each Provider must submit with its proposal: cuts, sketches, descriptive literature, and/or complete specifications covering the products offered. Reference to literature submitted with a previous bid does not satisfy this provision. Bids which do not comply with these requirements will be subject to rejection.

7.0 AWARD OF CONTRACT

As directed by statute, qualified bids will be evaluated and acceptance made of the lowest responsible, responsive bid most advantageous to GUC as determined upon consideration of such factors as prices offered, the quality of the article(s) offered, the general reputation and performance capabilities of the Provider, substantial conformity with the specifications and other conditions set forth in the bid, the suitability of the article(s) for the intended use, the related services needed, the date(s) of delivery and performance, and such other factors deemed by GUC to be pertinent or peculiar to the purchase in question.

Acceptance of the order includes acceptance of all terms, conditions, prices, delivery instructions, and specifications as shown on this set of Terms and Conditions and in this order or attached to and made a part of this order.

The conditions of this order cannot be modified except by written amendment in the form of "Amended Purchase Order," which has been approved by GUC's Procurement Coordinator.

In the event of a Provider's failure to deliver or perform as specified, GUC reserves the right to cancel the order or any part thereof, without prejudice to GUC's other rights. The Provider agrees that GUC may return part of or all of any shipment at Provider's expense. GUC may charge the Provider with all reasonable expenses resulting from such failure to deliver or perform.

8.0 MEDIATION/BINDING ARBITRATION

In the event of any dispute between the Parties, the Parties agree to submit any dispute to non-binding mediation before a mutually agreeable Mediator prior to initiating litigation. If the Parties are unable to agree upon a Mediator within thirty (30) days after demand therefore, either Party may petition a Court of competent jurisdiction for the designation of a qualified Mediator for these purposes. Each Party shall bear its own costs and expenses of participating in the mediation (including, without limitation, reasonable attorneys' fees), and each Party shall bear one-half (1/2) of the costs and expenses of the Mediator. Unless otherwise agreed, the Parties will hold the mediation in Greenville, North Carolina. The matters discussed or revealed in the mediation session shall not be disclosed in any subsequent litigation.

In the event the matter is not resolved in mediation, either Party may request arbitration. The parties shall jointly select an Arbitrator, and shall be bound by the decision of the Arbitrator with respect to any dispute between the parties with respect to this Agreement. If the parties are unable to mutually agree upon an Arbitrator, the Parties shall each select an Arbitrator, and the two Arbitrators so selected shall select a third Arbitrator, and the decision of the majority of the Arbitrators shall be conclusive and binding upon the Parties. The Parties at all times agree to equally split the costs of any Arbitrator(s) selected in an effort to resolve the dispute between the Parties. Any party desiring to resolve a dispute under the terms of this Agreement shall notify the other Party in writing, and the Parties shall seek to agree upon a mutually agreed-upon Arbitrator within a period of ten (10) days from the date of such written demand. If the Parties are unable to agree within such ten (10) day period, the Parties shall each select an Arbitrator, and the two (2) Arbitrators so selected shall select a third Arbitrator within fifteen (15) days from the date of the written demand for arbitration, and a decision shall be rendered by the Arbitrator(s) so selected within five (5) days after such Arbitrator(s) is selected.

9.0 GOVERNMENT RESTRICTIONS

In the event any Governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship, or performance of the items offered on this bid prior to their delivery, it shall be the responsibility of the successful Provider to notify the GUC Procurement Coordinator, at once, indicating in its letter the specific regulation which required such alterations. GUC reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or, in the sole discretion of GUC, to cancel the contract.

10.0 INSURANCE

10.1 Coverage – During the term of the contract, the Provider at its sole cost and expense shall provide commercial insurance of such type and with the following coverage and limits:

10.1.1 Workers' Compensation – The Provider shall provide and maintain Workers' Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$1,000,000 each accident, covering all Provider's employees who are engaged in any work under the contract. If any work is sublet, the Provider shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.

10.1.2 General Liability – Commercial Liability Coverage written on an "occurrence" basis in the minimum amount of \$1,000,000 per occurrence.

10.1.3 Automobile – Automobile Liability Insurance, to include coverage for all owned, hired, and non-owned vehicles used in connection with the contract with a minimum combined single limit of \$1,000,000 per accident.

10.2 Requirements - Providing and maintaining adequate insurance coverage is a material obligation of the Provider. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized to do business in North Carolina by the Commissioner of Insurance. The Provider shall at all times comply with the terms of such insurance policies and all requirements of the insurer under any of such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the Provider shall not be interpreted as limiting the Provider's liability and obligations under the contract. It is agreed that the coverage as stated shall not be canceled or changed until thirty (30) days after written notice of such termination or alteration has been sent by registered mail to GUC's Procurement Coordinator.

11.0 PATENTS AND COPYRIGHTS

The Provider shall hold and save GUC, its officers, agents, and employees, harmless from liability of any kind, including costs and expenses, including reasonable attorney fees, on account of any copyrighted articles or any patented or unpatented invention, device or appliance manufactured or used in the performance of this contract.

12.0 PATENT AND COPYRIGHT INDEMNITY

The Provider will defend or settle, at its own expense, any action brought against GUC to the extent that it is based on a claim that the product(s) provided pursuant to this agreement infringe any U.S. copyright or patent; and will pay those costs, damages, and attorney fees finally awarded against GUC in any such action attributable to any such claim, but such defense, settlements, and payments are conditioned on the following: (1) that Provider shall be notified

promptly in writing by GUC of any such claim; (2) that Provider shall have sole control of the defense of any action on such claim and of all negotiations for its settlement or compromise; (3) that GUC shall cooperate with Provider in a reasonable way to facilitate the settlement of defense of such claim; (4) that such claim does not arise from GUC modifications not authorized by the Provider or from the use of combination of products provided by the Provider with products provided by GUC or by others; and (5) should such product(s) become, or in the Provider's opinion likely to become, the subject of such claim of infringement, then GUC shall permit Provider, at Provider's option and expense, either to procure for GUC the right to continue using the product(s), or replace or modify the same so that it becomes non-infringing and performs in a substantially similar manner to the original product.

13.0 EXCEPTIONS

All proposals are subject to the terms and conditions outlined herein. All responses will be controlled by such terms and conditions and the submission of other terms and conditions, price catalogs, and other documents as part of a Provider's response will be waived and have no effect on this Request for Proposal or any other contract that may be awarded resulting from this solicitation. The submission of any other terms and conditions by a Provider may be grounds for rejection of the Provider's proposal. The Provider specifically agrees to the terms and conditions set forth in this set of Terms and Conditions by affixing its name on the signatory page contained herein.

14.0 CONFIDENTIAL INFORMATION

Except as provided by statute and rule of law, GUC will keep trade secrets which the Provider does not wish disclosed confidential. Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the Provider. Cost information shall not be deemed confidential. The determination of whether a matter is confidential will be determined by North Carolina law.

15.0 ASSIGNMENT

No assignment of the Provider's obligations or the Provider's right to receive payment hereunder shall be permitted without the express written consent of GUC, provided however, upon written request approved by the GUC Procurement Coordinator, solely as a convenience to the Provider, GUC may:

- Forward the Provider's payment check directly to any person or entity designated by the Provider, and
- Include any person or entity designated by Provider as a joint payee on the Provider's payment check.

- In no event shall such approval and action obligate GUC to anyone other than the Provider, and the Provider shall remain responsible for fulfillment of all contract obligations.

16.0 ACCESS TO PERSON AND RECORDS

GUC shall have reasonable access to persons and records of Provider as a result of all contracts entered into by GUC.

17.0 INSPECTION AT BIDDER'S SITE

GUC reserves the right to inspect, at a reasonable time, the item, plant, or other facilities of a prospective Provider prior to contract award and during the contract term as necessary for GUC's determination that such item, plant, or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the contract. Provider may limit GUC's access to restricted areas.

18.0 AVAILABILITY OF FUNDS

Any and all payments of compensation of this specific transaction and any continuation or any renewal or extension are dependent upon and subject to the allocation of GUC funds for the purpose set forth in this Agreement.

19.0 GOVERNING LAWS

All contracts, transactions, agreements, etc., are made under and shall be governed by and construed in accordance with the laws of the State of North Carolina.

20.0 ADMINISTRATIVE CODE

Bids, proposals, and awards are subject to applicable provisions of the North Carolina Administrative Code and General Statutes and Laws of the State of North Carolina.

21.0 EXECUTION

In the discretion of GUC, failure of a duly authorized official of Provider to sign the Signatory Page may render the bid invalid.

22.0 CLARIFICATIONS/INTERPRETATIONS

Any and all questions regarding these Terms and Conditions must be addressed to the GUC Procurement Coordinator. Do not contact the user directly. **These Terms and Conditions are a complete statement of the parties' agreement and may only be modified in writing signed by Provider and the GUC Procurement Coordinator.**

23.0 SITUS

The place of all contracts, transactions, agreements, their situs and forum, shall be North Carolina, where all matters, whether in contract or tort, relating to the validity, construction, interpretation, and enforcement shall be determined.

24.0 TERMINATION OF AGREEMENT

GUC or Provider may terminate this Agreement for just cause at any time. Provider will be paid for all time and expenses incurred as of the termination date. Termination for just cause by either party shall be by certified letter and shall be effective thirty (30) days after signed and acknowledged receipt of said letter. Just cause shall be based on reasonable grounds, and there must be a fair and honest cause or reason for such action. The causes for termination, include, but are not limited to: (1) Provider's persistent failure to perform in accordance with the Terms and Conditions, (2) Provider's disregard of laws and regulations related to this transaction, and/or (3) Provider's substantial violation of the provisions of the Terms and Conditions.

25.0 DELIVERY

Shipments will be made only upon releases from a purchase order issued by GUC in accordance with GUC's current needs. Time is of the essence with respect to all deliveries under this Agreement.

Delivery of all equipment, materials, or supplies shall be made Free on Board (FOB) GUC Warehouse, 701 Utility Way, Greenville, North Carolina 27834, unless otherwise specified. The agreed price for such equipment, materials, or supplies shall include all costs of delivery and ownership, and risks of loss shall not be transferred from Provider to GUC until express written acceptance of delivery and inspection by GUC. Delivery hours are between 8:00 AM and 4:30 PM Monday-Friday only. **GUC's purchase order number is to be shown on the packing slip or any related documents.** GUC reserves the right to refuse or return any delivery with no purchase order number or which is damaged. GUC will not be charged a restocking fee for any delivery which is refused or returned.

26.0 INDEMNITY PROVISION

Provider agrees to indemnify and save GREENVILLE UTILITIES COMMISSION of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, its co-owners, joint venturers, agents, employees, and insurance carriers harmless from any and all losses, claims, actions, costs, expenses including reasonable attorney fees, judgments, subrogations, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person arising out of or incident to the performance of the terms of this Contract by Provider, including, but not limited to, Provider's employees, agents, subcontractors, and others designated by Provider to perform work or services in, about, or attendant to, the work and services under the terms of this Contract. Provider shall not be held responsible for any losses, expenses, claims, subrogations, actions, costs, judgments, or other damages, directly, solely, and proximately caused by the negligence of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina. Insurance covering this indemnity agreement by the Provider in favor of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, shall be provided by Provider.

27.0 FORCE MAJEURE

Neither party shall be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, existing or future, which is beyond the reasonable control of such party. In any such event of

force majeure, the parties shall advise each other of such event, and the parties shall negotiate an equitable adjustment to their respective obligations under this Agreement.

28.0 WARRANTY(IES)

The Provider hereby includes all warranties, whether expressed or implied, including, but not limited to, the Implied Warranty of Merchantability and the Implied Warranty of Fitness for a Particular Purpose.

29.0 INTEGRATED CONTRACT

These Terms and Conditions, Instructions to Bidders, Specifications, and the selected Provider's bid represents the entire contract between the Parties. No verbal or other written agreement(s) shall be held to vary the provisions of this Agreement.

30.0 CONTRACT PROVISIONS

Each of the provisions of these Terms and Conditions shall apply to the full extent permitted by law, and the invalidity in whole or in part of any provision shall not affect the remainder of such provision or any other provisions.

31.0 E-VERIFY

E-Verify - I understand that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25 et seq. I am aware of and in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes. To the best of my knowledge, any subcontractors employed by me as a part of this contract are in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes.

32.0 IRAN DIVESTMENT ACT CERTIFICATION

By acceptance of this purchase order, Vendor/Contractor certifies that, as of the date of the purchase order or contract, it is not on the Final Divestment List as created by the State Treasurer pursuant to N.C.G.S. § 143-6A-4. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. § 143C-6A-5(b), Vendor/Contractor shall not utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List.

TECHNICAL SPECIFICATIONS
FOR
GCP-10112 VOA Site C Road Gas Improvements

GREENVILLE UTILITIES COMMISSION

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**GREENVILLE UTILITIES COMMISSION
NATURAL GAS DEPARTMENT**

**SPECIFICATIONS FOR
GCP-10112 VOA SITE C ROAD GAS IMPROVEMENTS**

1 SECTION 1 - GENERAL

1.1 Scope of work

The work included under this Contract shall include supplying all necessary materials not supplied by the Greenville Utilities Commission (GUC), labor and equipment to install natural gas distribution mains and all necessary appurtenances within the GUC's natural gas distribution system as specified herein and detailed on the Plans and/or as designated by the ENGINEER.

Natural gas main installations will include four (4) inch main. The piping will be medium- and high- density polyethylene. The work involved will include installation of mains to be operated at 60 psig. All mains will be tested at 90 psig.

This Contract shall require the CONTRACTOR to work on live gas mains.

The types of work required under this Contract shall include: direct burial, directional drilling, and bore installation of polyethylene natural gas mains.

The GUC reserves the right to add to or delete from the work once the CONTRACTOR has mobilized. This work must be performed in the order directed by the ENGINEER. The GUC also reserves the right to extend the term of the Contract to allow for completion of any additional work added to this Contract.

Award of this Contract shall in no way restrict the GUC from using its own construction crews or from hiring additional CONTRACTORS to perform the same or similar type work.

1.2 Compliance

The CONTRACTOR shall comply with all provisions of the GUC's *Operation and Maintenance Plan*, dated April 29, 2011, or latest revision, and CFR Title 49, Part 192.

1.3 Bidder Qualifications

All bidders must be pre-qualified by the GUC prior to submission of the Bid Proposal. Contact the ENGINEER for qualification information.

1.4 Operator Qualification (OQ)

CONTRACTORS are required to provide a current copy of the Company's Operator Qualification (OQ) Plan for natural gas distribution work prior to award of the Contract. Copies of all employee OQ qualifications shall be provided to the ENGINEER prior to beginning the work. The OQ written plan and employee records shall be in accordance with Title 49 of the Code of Federal Regulations, Chapter I, Part 192 (49 CFR 192), Subtitle N, "Qualification of Pipeline Personnel."

The CONTRACTOR shall furnish the GUC with records of continuous employee qualification for all employees with each monthly progress payment application. Qualification documentation shall be provided for all new employees prior to performing work on the GUC's natural gas system.

The GUC may, at its discretion, accept the provisions of a CONTRACTOR's Plan. CONTRACTORS shall make available, upon request, written records of their employee's qualifications. At a minimum these records shall include:

- Identification of qualified individual(s)
- Identification of covered task(s) each individual is qualified to perform
- Date that current qualification was received
- Method of evaluation used to obtain qualification
- Name of individual or organization for each covered task
- Training program outlines and materials
- List of non-qualified individuals that will be performing tasks on behalf of the GUC while under the direction of a contract qualified individual.

1.5 **Drug Testing**

Any and all employees of the CONTRACTOR who will be involved with natural gas distribution construction and maintenance operations required by this contract shall be required to participate in an anti-drug/drug testing program. This program shall be administered in accordance with Title 49 of the Code of Federal Regulations, Chapter I, Part 199 (49 CFR 199), "Drug Testing," and Subtitle A, Part 40, "Procedures for Transportation workplace Drug Testing Programs." The program must have been in force for no less than 12 months and the CONTRACTOR must show proof of enforcement to the Owner.

The CONTRACTOR shall furnish the GUC with documentation of participation in a qualified drug-testing program. Prior to the performance of any fusion and/or tie-in operations, a negative (no evidence of drug use) test must be documented for all employees who will be involved with these operations.

1.6 **Inspection**

The ENGINEER shall have access to the work at all times. The CONTRACTOR shall provide proper facilities for such access and for inspection. The ENGINEER shall be present for all special testing or approval of the work that is required by the Specifications, the ENGINEER's instructions, laws, ordinances, or any public authority.

The ENGINEER, in order to be present, shall be given sufficient notice prior to any required testing or approval. The CONTRACTOR shall have no claim against the GUC for time or monies when sufficient notice, as described above, is not given to the ENGINEER.

The ENGINEER may require re-examination of any of the work. If required, the CONTRACTOR shall provide all labor and equipment necessary to uncover the work. If the work is determined to be in accordance with the Specifications, the GUC will pay the costs of re-examination and replacement. If the work is not in accordance with the Specifications, the CONTRACTOR shall pay such costs.

Inspector(s) will be stationed at the work site to report to the ENGINEER as to the progress of the work, the manner in which it is being performed, and also to report whenever it appears that the materials furnished by either the GUC or the CONTRACTOR or the work performed by the CONTRACTOR fails to meet the requirements of the Plans or Specifications.

If a dispute arises between the Inspector and the CONTRACTOR as to the materials furnished or to the manner of performing the work, the Inspector shall have the authority to reject the questionable materials or suspend the work until the issue can be referred to and a decision can be made by the ENGINEER. Inspectors are not allowed to revoke, alter, enlarge, relax or release any requirements of these Specifications or to issue instructions contrary to the Contract Documents. Inspectors shall in no case act as foremen or perform duties for the CONTRACTOR or interfere with the management of the work by the CONTRACTOR.

The ENGINEER will make a final inspection of the work included in the Contract as soon as possible after notification from the CONTRACTOR that the work is substantially complete and ready for inspection. If any of the work is not acceptable at the time of the inspection, the ENGINEER will advise the CONTRACTOR, in writing, as to the particular item(s) to be completed or corrected before the work can be given final approval and final payment for the work is approved.

1.7 **Scheduling of work**

The CONTRACTOR shall typically have control of the scheduling of the proposed work, however, the GUC reserves the right to require sections of the work to be completed prior to or following other sections of the work.

The CONTRACTOR shall provide a schedule of the work to the ENGINEER, prior to beginning the work. The schedule shall include station-by-station progression, milestones (dates) for the proposed progress, crew introduction and exit information, and other relevant information deemed necessary by the ENGINEER.

1.8 **Superintendence**

The CONTRACTOR shall keep on the work at all times during its progress a competent resident Superintendent, having a minimum of three (3) years experience in the installation of natural gas distribution facilities. The Superintendent shall represent all work performed by all of the CONTRACTOR's crews and shall not function as the foreman for any individual crew when more than one crew is onsite performing work required by the Contract. The Superintendent shall not be replaced without written notice to the ENGINEER except under extraordinary circumstances, as determined by the ENGINEER. The Superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications to or from the Superintendent shall be binding as if given to or received from the CONTRACTOR.

1.9 **CONTRACTOR Crew Requirements**

The CONTRACTOR shall provide a sufficient number of crews to efficiently complete the work required by the Contract within the Contract Period. For the purpose of this Contract, the term crew shall be defined as a collective group of CONTRACTOR personnel consisting of a foreman and other necessary personnel knowledgeable and able to perform a specific task or tasks. The CONTRACTOR shall provide a minimum of one mainline crew for this project. The CONTRACTOR shall provide the ENGINEER with five (5) working days notice prior to introducing new crews to the Project. The GUC reserves the right to limit the number of crews or request additional crews to complete the work associated with this Project.

1.10 **Implied work**

All incidental work required through the Plans and/or the Specifications, or as otherwise directed by the ENGINEER, for which no payment is specifically provided, and any and all work or materials not specified herein which may fairly be implied as included in the Contract and necessary to complete the work, and which the GUC shall judge to be so included, shall be executed and/or furnished by the CONTRACTOR without extra compensation.

1.11 Required work Not Covered by a Unit Cost

For any required work that is not covered by a specific unit cost in the Bid Proposal, a price must be submitted to and approved by the ENGINEER prior to performing the work. Any work performed without prior, written approval from the ENGINEER will be performed at the sole expense of the CONTRACTOR.

End of Section 1

2 **SECTION 2 - GENERAL CONSTRUCTION MATERIALS**

The CONTRACTOR shall supply and pay for all labor and materials necessary for the completion of the work specified herein and on the Plans, except as otherwise expressly provided for in the Contract Documents. Unless otherwise specified, all materials shall be new.

2.1 **Stone - Riprap**

Stone for riprap shall be sound, durable, and free from seams, cracks, and other structural defects. Riprap and bedding shall be crushed stone, conforming to the requirements of NCDOT *Standard Specifications for Road and Structures*, latest edition.

2.2 **Crushed Aggregate Base Course (CABC)**

Crushed aggregate used for maintaining traffic, and repairing and constructing private access pavements shall be crushed from stone, slag or gravel and shall contain all of the sizes produced when the original aggregate is reduced through a series of crushers to the maximum size specified. It shall be free of all deleterious substances in accordance with the NCDOT *Standard Specifications for Road and Structures*, latest edition.

2.3 **Select Fill**

Material used for bedding or backfill material purposes shall consist of approved materials; typically clean topsoil or other borrow material capable of achieving necessary compaction required for protection of the pipe and pipe and trench stabilization, as approved by the ENGINEER.

2.4 **Sand**

Sand shall be naturally occurring sand or manufactured stone sand. Natural sand shall consist of grains of hard, sound material, predominantly quartz, occurring in natural deposits. Manufactured sand shall consist of sound crushed particles of minimum NCDOT Grade B stone, essentially free from flat or elongated pieces, with sharp edges and corners removed. All sand shall be clean and free from foreign matter such as loam, dirt, sticks, roots, leaves, silt, vegetable matter and oil or dyestuffs.

2.5 **Concrete**

Concrete shall be Class B (3000 psi minimum) for sidewalks, driveways, and curb and gutters and shall conform to the requirements of NCDOT *Standard Specifications for Road and Structures*, latest edition Sections 825, 846 and 848.

End of Section 2

3 SECTION 3 - GENERAL CONSTRUCTION REQUIREMENTS

3.1 Standards

The work covered by these Specifications consists of, and includes, the performance of all operations and the furnishing of all labor, equipment, supplies and other facilities and incidental materials, as required, necessary for the construction of natural gas distribution mains and other facilities complete. The work shall be complete, tested, accepted and connected to the existing gas distribution systems.

All work on the natural gas distribution system shall be performed in accordance with: Title 49 of the Code of Federal Regulations, Chapter I, Part 192 (49 CFR 192), "Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards," as amended; the GUC's *Operation and Maintenance Plan*, as amended; and any other applicable standards which are hereby incorporated into these Specifications by reference.

General construction operations applicable to natural gas facilities installation shall be performed in accordance with: Title 29 of the Code of Federal Regulations, Chapter I (29 CFR 1926), *Occupational Safety and Health Standards for the Construction Industry*; and any other applicable standards which are hereby incorporated into these Specifications by reference.

3.2 Mobilization

The CONTRACTOR shall furnish all equipment, materials and labor necessary for the performance of construction preparatory operations, including but not limited to: the movement of personnel, material and equipment to and from the project site; the establishment of the CONTRACTOR's offices and storage and equipment areas; the establishment of all markings, signs, traffic detours and controls; and all other facilities necessary to perform the work as specified herein.

Measurement and Payment

The cost of mobilization will be covered by a specific contract unit price. The Contractor may bill 50% of the amount with the first invoice and 50% on the second invoice. The cost of any and all bonds, licenses, equipment, materials, labor, etc., required for startup or mobilization operations shall be included in the unit price bid.

3.3 Equipment, Tools, Labor and Materials

3.3.1 Equipment, Tools, Labor and Materials To Be Furnished By OWNER

The GUC shall supply no equipment, tools, or labor necessary for the completion of the work as specified herein.

The GUC shall supply the CONTRACTOR with all pipe, tees, elbows, reducers, valves, valve boxes and tracer wire as listed in the Bill of Materials on the construction drawings. Material furnished by the GUC will be available to the CONTRACTOR at the GUC's storage facilities located at the Operations Center, 701 Utility Way, Greenville, North Carolina. The CONTRACTOR shall requisition materials on the form provided by the GUC and shall account for or return all materials so requisitioned. No separate payment will be made to the CONTRACTOR for time, labor and equipment necessary for the CONTRACTOR to receive and haul materials from the GUC's storage facilities to the work site(s); such costs are to be included in and absorbed by the unit prices bid in the CONTRACTOR's proposal.

3.3.2 Equipment, Tools, Labor and Materials To Be Furnished By CONTRACTOR

The CONTRACTOR shall supply and pay for all labor and materials necessary for the completion of the work specified herein. The CONTRACTOR shall supply any and all materials incidental to the installation of the gas pipe not supplied by the GUC as described in 3.3.1 Equipment, Tools, Labor and Materials To Be Furnished by OWNER, including but not limited to: select fill, sand and gravel; concrete; asphalt; testing equipment and fittings; erosion and sediment control materials; and protective rock shields. Unless otherwise specified, all materials shall be new.

The CONTRACTOR shall provide and pay for all equipment, tools and labor necessary for the proper completion of the work specified herein, including but not limited to: excavation and trenching equipment; pipe cutting, welding and fusing equipment and supplies; pipeline testing equipment; traffic control devices; and any and all applicable safety equipment which may be required.

Workmanship, tools, equipment and materials shall be of good quality meeting established industry standards. The CONTRACTOR shall, as required by the ENGINEER, furnish satisfactory evidence as to the kind and quality of materials that the CONTRACTOR provides.

Only equipment that will not damage the surfacing along any improved roadways shall be used. When crossing improved roadways with equipment that will damage it, wood boards, flat pads or other approved methods shall be used to prevent damage to the roadway. The CONTRACTOR shall repair any and all resulting damage at no cost to the GUC.

The CONTRACTOR shall, as required by the ENGINEER, furnish a complete list of equipment that will be employed on the job from the commencement of the work and until the ENGINEER accepts the job.

3.4 Inspection By The Engineer

Prior to installation of the gas distribution facilities, the ENGINEER shall inspect all pipe, fittings, valves, and other appurtenances in accordance with all provisions specified herein as well as all applicable manufacturers' standards and specifications. The CONTRACTOR shall remove from the work all materials which do not meet the provisions specified herein, as well as any and all manufacturer's standards and specifications, and replace such with acceptable materials.

The CONTRACTOR shall produce evidence, as required by the ENGINEER, that any and all items of the work have been installed in accordance with the project Plans and Specifications. The ENGINEER will conduct field inspections and witness field tests as specified herein.

3.5 Submittals

All submittals shall be identified as required by the ENGINEER, and shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and any and all other data which may be required by the ENGINEER to show that the materials and equipment the CONTRACTOR proposes to provide and use are in accordance with required Specifications.

3.5.1 As-Built Documents

The GUC and its inspector(s) will collect as-built information for this project. The CONTRACTOR shall allow the GUC access to the work during the installations and prior to backfill operations such that the necessary data collection can be completed.

No claims for time extensions or monetary considerations will be allowed by the GUC for the work required by the as-built data collection.

3.6 Right-of-Way and Easements

The CONTRACTOR shall confine construction operations to the immediate vicinity of the project location as shown on the Plans and in no case shall the CONTRACTOR encroach beyond the limits of the City of Greenville or of the NCDOT rights-of-way. The CONTRACTOR shall further use due care in placing construction tools, equipment, excavated materials, and pipeline facility materials and supplies so as to cause the least possible damage to property and the least interference with traffic. The placing of such tools, equipment, and materials shall be subject to the approval of the ENGINEER. Any damage resulting from the placement of equipment and materials or construction operation occurring outside of the City of Greenville or NCDOT rights-of-way or designated work areas shall be the sole responsibility of the CONTRACTOR. The CONTRACTOR shall make satisfactory settlement for any damage directly with the property owner involved.

The CONTRACTOR shall conduct the construction in such a manner to cause the least inconvenience to the citizens of the area, thereby maintaining good public relations. The CONTRACTOR shall not unnecessarily interfere with the use of any public or private improvements, including landscaping; nor unnecessarily damage such improvements. The CONTRACTOR shall repair any damage to such improvements to pre-construction condition, or as otherwise directed by the ENGINEER.

3.6.1 Protection of Existing Property Irons and Monuments

The CONTRACTOR shall use care in protecting existing property irons and monuments adjacent to his working area. If a property iron or monument must be removed to install new facilities, the CONTRACTOR shall be responsible for locating the iron or monument in such a manner that a surveyor, registered by the North Carolina Board of Examiners for Professional Engineers and Surveyors, can accurately replace the iron or monument after construction of the new facilities. If a property iron or monument is destroyed because of neglect on the part of the CONTRACTOR, a surveyor registered by the North Carolina Board of Examiners for Professional Engineers and Surveyors shall immediately replace it at the CONTRACTOR's expense.

3.7 Cooperation Among CONTRACTORS

The CONTRACTOR shall not hinder the work being performed by other contractors within the limits of or adjacent to this Project. The CONTRACTOR shall cooperate with other contractors, utilities or entities working in the Project area or adjacent to the Project area. The ENGINEER shall provide assistance, when necessary, to assure that the Project is completed in a manner which is in the best interest of the GUC.

When contracts are awarded to or contracts are active by separate contractors for concurrent construction in or adjacent to the work area, the CONTRACTOR shall update the Project Schedule and submit this schedule to the ENGINEER for review. For separate contracts awarded by other entities, the ENGINEER shall review and compare the contractor schedules with the appropriate department(s). If necessary, revisions to the schedule will be provided to the CONTRACTOR. The CONTRACTOR shall be allowed to request modifications to the revised schedule which will not conflict with or hinder the work scheduled to be performed by others.

The CONTRACTOR shall assume all liability, financial or otherwise, in connection with the Contract and shall protect and save harmless the GUC from any and all damages and claims that may arise because of any inconvenience, delay, or loss he experiences as a result of the presence and operations of other contractors working in or near the work. The CONTRACTOR shall also assume all responsibility for any of the work not completed due to the presence or operation of other contractors.

Except for an extension of the Contract Length, the GUC will not be responsible for any inconvenience, delay, or loss experienced by the CONTRACTOR as a result of his failure to gain access to the work at the time contemplated. When the failure to gain access is not due to any fault or negligence of the CONTRACTOR, an extension of the Contract Length may be allowed on the basis of the amount of time delayed.

The GUC will not assume any responsibility for acts, failures, or omissions that delay the work, except as provided herein.

If the CONTRACTOR or any of their subcontractors or employees cause loss or damage to any other contractor, and if such other contractor makes a claim against the GUC, its employees or agents, due to any loss so sustained the GUC shall notify the CONTRACTOR, who shall defend, indemnify and save harmless the GUC, its employees and agents against any such claim, expense or judgment arising there from.

Upon the written request of the CONTRACTOR, the ENGINEER may relieve the CONTRACTOR of the requirement of maintaining and protecting certain portions of the work which have been completed in all respects in accordance with the requirements of the Specifications and other Contract Documents and to the satisfaction of the ENGINEER and of which the GUC has taken occupancy or use of, and thereafter except with the ENGINEER's consent, the CONTRACTOR will not be required to do further work thereon. In addition, such action by the ENGINEER will relieve the CONTRACTOR of responsibility for injury or damage to said completed portions of the work resulting from work performed by other contractors, utilities or entities. However, nothing in this section will be construed as relieving the CONTRACTOR of full responsibility for repairing, removing and replacing defective work or materials found at any time before the completion and acceptance of all work by the ENGINEER or within the Guarantee Period for the work.

3.8 Maintenance of Traffic

The CONTRACTOR shall be required to provide maintenance of traffic within the construction area for the duration of the construction period, including during any temporary suspension of work. Maintenance of traffic shall be performed conforming to the current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).

When requested by the ENGINEER, the CONTRACTOR shall provide a detailed Traffic Maintenance Plan for portions of the work prior to beginning work to be performed under this Contract. The submitted traffic plan shall be reviewed by the ENGINEER for completeness and compliance with the requirements of the City of Greenville and NCDOT. If revisions are required for the plan(s), the CONTRACTOR shall be provided with the revised plan or be required to submit a revised plan. The CONTRACTOR must have an approved traffic maintenance plan prior to commencing the work for the section(s) covered by the plan.

Where it becomes necessary to close roadways or sections of roadways, the amount of roadway closure shall be generally limited to the immediate work area and shall be in accordance with the above manual and specifications. In the event that an entire roadway or section of roadway is required to be closed, the CONTRACTOR will be required to notify and receive authorization from the ENGINEER prior to closing the road and upon reopening the road.

All materials, equipment and labor used for traffic control measures shall meet the requirements of the NCDOT. Traffic control measures shall be made available to the ENGINEER for inspection prior to commencement of the work.

Measurement and Payment

Maintenance of traffic is considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for maintenance of traffic, as specified herein, shall be included in the unit prices bid for the various pay items of the work.

3.8.1 Traffic Cones, Barrels, Barricades and Signs

The CONTRACTOR shall furnish, install and maintain sufficient traffic cones, barrels, barricades and signs to perform the work in accordance with the NCDOT requirements for traffic control. The traffic cones, barrels, barricades and signs shall be in accordance with the specifications provided for in the "Manual on Uniform Traffic Control Devices".

3.8.2 Flagging Operations

The CONTRACTOR shall furnish sufficient personnel and equipment to perform flagging operations as required by the work. The personnel shall be certified by the NCDOT to perform flagging operation. The equipment shall meet the guidelines and specifications of NCDOT and the MUTCD.

3.8.3 Maintenance of Ingress and Egress

The CONTRACTOR shall strive to maintain, at all times during the execution of the work, continuous ingress and egress to all affected properties and traveled ways. When ingress and egress to affected parcels must be blocked, due to the direct execution of the work, twenty-four (24) hours advance notice must be given to the affected property owner by the CONTRACTOR. In no case shall the blocking of ingress and egress be allowed for more than twenty-four (24) hours consecutively.

3.9 Pavement Removal and Disposal

The CONTRACTOR shall not cut any NCDOT maintained pavement unless a permit for cutting pavement at the specific location has been obtained from the North Carolina Department of Transportation. The CONTRACTOR shall be responsible for working with the ENGINEER to obtain the necessary permit.

Removal of pavement includes cutting of the pavement, breaking of the pavement surface and excavating the pavement using conventional trenching, hand and pneumatic equipment. Pavement removal includes removal of all layers of bituminous asphalt and concrete pavement necessary to properly install the pipe and/or appurtenances. Removal of pavement shall be limited to twenty-four (24) inches of width for mainline installations. The removal of pavement for test holes shall be in accordance with 3.13.2 Test Hole Excavations.

Maximum cutting dimensions for trenches and bellholes shall be in accordance with 3.16 Pavement and Concrete Replacement. Cutting in excess of these dimensions, unless approved by the ENGINEER, shall not be measured for payment. Pavement cutting shall be required in all direct burial applications, as indicated on the construction Plans, as required by permit, or as directed by the ENGINEER.

Where pavement is cut and replaced, the CONTRACTOR shall cut the edges to a straight and even line before repairing the pavement. Non-uniform edges will not be permitted or accepted.

All pavements removed as part of the work shall be removed from the jobsite and disposed of in accordance with the requirements of Federal, State, County, City of Greenville, and all applicable environmental regulations.

Measurement and Payment

Removal and disposal of pavement along mainline trenches, as described above, will be measured for payment in units of linear feet through the removed pavement section. Unit bid price shall also include cutbacks of surface pavement grades, and stepping of sub and base pavement grades.

Removal and disposal of pavement for excavation of bellholes within previously unexcavated and restored asphalt sections, as described above, will be measured for payment in units of square feet of the removed pavement section. Unit bid price shall also include cutbacks of surface pavement grades, and stepping of sub and base pavement grades.

The cost of removal and disposal of bellhole pavement within the limits of previously excavated and restored trenchlines for this project shall be considered incidental and shall

not be measured for payment a second time. The cost of any and all equipment and labor required for removal and disposal of asphalt for bellholes, as specified herein, shall be included in the various pay items of the work.

The CONTRACTOR should be aware that the thickness and materials of the surface and subgrades may vary.

Payment for removal and disposal of pavement will be made at the unit price bid. The bid price shall include the cost of any and all equipment and labor required for removal and disposal of bituminous and concrete pavement. Pavement removed and disposed of in excess of what is allowable and reasonable for installation of main and appurtenances shall be performed at the expense of the CONTRACTOR and will not be measured for payment.

3.9.1 Sidewalk, Driveway, and Curb and Gutter Removal and Disposal

The CONTRACTOR shall not cut or remove any NCDOT maintained sidewalk or curb and gutter sections unless a permit for cutting/removal of the sections at the specific location has been obtained from the North Carolina Department of Transportation. The CONTRACTOR shall be responsible for working with the ENGINEER to obtain the necessary permit.

Removal of concrete sidewalks, driveways, and concrete curbing and gutters includes the cutting of or the breaking of the concrete structure using conventional excavating, hand and pneumatic equipment. Removal of concrete sidewalks, driveways, and concrete curbing and gutters shall correspond to existing jointing. Removal of partial sidewalk sections shall not be permitted.

Cutting of the concrete sections shall be performed using appropriate saw(s) and shall be in a neat and workmanlike manner. The CONTRACTOR shall only remove sections necessary for the proper installation of the natural gas mains or sections damaged as a result of the construction activity.

All sidewalk, driveway or curbing and gutter sections removed as part of the work shall be removed from the jobsite and disposed of in accordance with the requirements of Federal, State, County, City of Greenville, and all applicable environmental regulations.

Measurement and Payment

Removal and disposal of concrete sidewalk and driveway as described above is considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for removal and disposal of concrete

sidewalk and driveway, as specified herein, shall be included in the unit prices bid for the various pay items of the work.

3.10 **Erosion & Sediment Control**

The CONTRACTOR shall be required to provide a means of protecting and minimizing the effects of erosion and sediment displacement to the construction area and all immediate surrounding areas that may be affected by the construction activity.

Erosion and sediment control measures, including but not limited to: temporary stone construction entrances; silt fences; storm drain inlet protectors; stone for erosion control; soil stabilization mats; topsoil; temporary seeding; and permanent seeding shall be installed and maintained as indicated on the Plans, or as otherwise directed by the ENGINEER, in accordance with the *North Carolina Erosion and Sediment Control Planning and Design Manual*, the *North Carolina Erosion and Sediment Control Field Manual*, latest editions.

Measurement and Payment:

Due to the nature of this project, only minimal erosion control measures are expected. The cost of any and all equipment, materials, and labor required for erosion and sediment control, as specified herein, shall be included in the cost per acre.

3.11 **Pipe and Materials Handling**

The CONTRACTOR shall load, unload, haul, receive, sign for, store, and otherwise be responsible for all materials. All materials shall be handled and placed in a manner that prevents damage and does not interfere with public and private travel.

All pipes shall be lifted, rolled, or otherwise handled either manually or by mechanical means so as to not damage the pipe or coating. All damaged pipe or coating shall be repaired and acceptance of it shall be contingent upon approval by the ENGINEER.

Polyethylene pipe shall be protected from fire, excessive heat, harmful chemicals, and long-term exposure to direct sunlight. The CONTRACTOR shall exercise due care during handling to prevent gouges, scratches, cuts, kinks, flattening, or punctures in the pipe. All defects or damage which could impair the serviceability of the polyethylene pipe, in the opinion of the ENGINEER, including cuts, gouges or scratches which are deeper than ten (10) percent of the wall thickness of the pipe or pipe that has a non-conforming shape shall be removed from the pipe joint or the piping system. When loading, unloading, moving and placing polyethylene pipe, the CONTRACTOR shall avoid dropping or dragging the pipe. Chains shall not be used for handling polyethylene pipe.

Polyethylene pipe shall be stored in the shade to minimize expansion of the pipe and adverse effects of ultraviolet light to the pipe.

The height of polyethylene pipe stacks shall not exceed four (4) feet. Pipe shall not be stored overnight on the job site unless it is stored in an area protected from vandals. Pipe and other materials shall not be placed directly on the ground but rather on wooden pallets or a similar clean, flat surface.

Fusion operations on polyethylene pipe shall be performed adjacent to the trench and the pipe lifted and lowered into the trench. Where absolutely necessary to fuse polyethylene pipe at another location than adjacent to the trench, as allowed and confirmed by the ENGINEER, the pipe shall be lifted and carried to the trench. Under no circumstances shall any length or portion of the polyethylene pipe be dragged, slid, pushed or pulled, on any surface to the trench.

In all cases, materials shall be handled and stored in a manner suitable to the ENGINEER; which will facilitate inspection.

3.12 Bending of Pipe

3.12.1 Polyethylene Pipe

Pipe bends shall be used, as required, in place of fabricated fittings to change the horizontal and/or vertical alignment of polyethylene pipe.

The bending radius for polyethylene pipe shall not be less than the minimum recommended by the manufacturer for the kind, type, grade, wall thickness, and diameter of the particular polyethylene used as listed in Table 3.12.1.

**TABLE 3.12.1
 MINIMUM BENDING RADIUS OF POLYETHYLENE PIPE**

NOMINAL PIPE SIZE	OUTSIDE DIAMETER (D) (INCHES)	RADIUS OF CURVATURE R = D(25)
2"	2.375	5'-0"
4"	4.500	9'-5"
6"	6.625	13'-10"
8"	8.625	18'-0"

A manufactured elbow shall be used if a change in direction cannot be accomplished in accordance with Table 3.12.1. Care shall be taken to prevent kinking in the polyethylene pipe. If the polyethylene pipe becomes kinked, the kinked section shall be cut out and replaced.

All fittings including butt fused, saddle fused and/or electrofused valves, elbows, tees, and couplings shall be installed such that they are located on a straight section of pipe, a minimum of three (3) feet from any field bend.

Measurement and Payment

Pipe bending operations are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for pipe bending operations shall be included in the unit prices bid for the various pay items of the work.

3.13 Pipe Installation

3.13.1 Location of Other Utilities

The location of existing utilities shown on the drawings was taken in part from records and in part from field surveys, and may not be complete or represent the exact location of the existing utilities. The GUC assumes no responsibility for the

existence and/or location of any other utilities in the work area. It shall be the responsibility of the CONTRACTOR, to investigate and verify the existence and location of all utilities within the vicinity of the work.

The CONTRACTOR shall comply with all the provisions of the North Carolina Underground Utility Damage Prevention Act (Section 1, Chapter 87, North Carolina General Statutes, 1985, as amended) and hold the GUC harmless against any loss, damages or claims of any nature whatsoever arising out of the CONTRACTOR's failure to comply with the requirements of the aforesaid act.

At least seventy-two (72) hours prior to starting the work the CONTRACTOR shall verify the existence and location of all underground utilities, structures and associated appurtenances. The CONTRACTOR shall notify the NC-811 Call-Center (811 or 1-800-632-4949) to locate all participating underground utilities. The CONTRACTOR shall be responsible for identifying all utilities in the work area that are not participating members of the one-call system. These utility operators shall be provided with a minimum seventy-two (72) hours notice to have their facilities located prior to starting the work.

After 72 hours, the CONTRACTOR may commence excavation only if NC-811 is contacted to confirm that all utilities have either marked their underground line locations or reported that no lines are present within the vicinity of the excavation or demolition site. Prior to commencing any excavation, the CONTRACTOR must inspect the site for clear evidence of unmarked facilities.

After the markings have been made, the CONTRACTOR is required to maintain a minimum clearance of two feet between a marked underground utility line and cutting edge of any power-operated excavating equipment. Care should be taken or excavation should be performed with hand tools if the excavation is within two feet of any marking.

If during the course of the excavation, a utility line has been exposed, before backfilling, the CONTRACTOR must inspect these facilities to ascertain if the facilities have been damaged. If damage of any kind is discovered or suspected, it is the CONTRACTOR's responsibility to notify the utility owner immediately.

The excavation of test holes may, upon the approval and/or direction of the ENGINEER, be required to ascertain the existence, location, size, type, and alignment of existing utilities or underground structures. The dimensions of these test holes shall be the minimum required to effectively locate the utilities and underground structures.

In the event that any gas lines, water lines, sewer lines, electric lines, cables, conduit, and/or any other existing utility, either underground or above ground, is damaged by

the CONTRACTOR during the prosecution of the work, the owner of the damaged utility shall be notified immediately. Any fine, penalty or costs associated with the repair of the damaged utility are the sole responsibility of the CONTRACTOR.

The work shall be coordinated and performed in a manner so that all existing fire hydrants, without exception, shall be accessible at any time during the work.

The CONTRACTOR shall maintain the existing streams, ditches, drainage structures, culverts and flows at all times during the work. The CONTRACTOR shall pay for all personal injury and property damage that may occur as a result of failing to facilitate drainage.

The CONTRACTOR shall maintain sewage flow at all times by pumping and/or diversion, or other means acceptable to the ENGINEER. At no time shall the CONTRACTOR allow raw sewage to flow out of the sewer system to adjacent land or waterways. At no time shall the CONTRACTOR cause sewage to surcharge the sewage system such that sewage backs up into any service connection. In the event such backup occurs, the CONTRACTOR shall correct and pay for all damage caused.

Measurement and Payment

Utility locating operations is considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for utility locating operations shall be included in the unit prices bid for the various pay items of the work.

3.13.2 Test Hole Excavations

The excavation of test holes shall be utilized as a means to ascertain the existence, location, size, type, and vertical alignment of existing utilities or underground structures. Failure to take such precautions may result in the CONTRACTOR adjusting the work or having the existing utility relocated, at the CONTRACTORs expense. Unless otherwise approved by the ENGINEER, the dimensions of these test holes shall be a maximum of twelve-inches by twelve-inches (12"x12"). The CONTRACTOR shall excavate test holes to evaluate the locations of known utilities that will be crossed when boring or directional drilling installation methods are used.

Excavation of test holes shall include cutting, breaking and removal of the pavement surface and excavation of subsurface materials necessary to properly inspect the buried utilities or drainage structures. Excavation of subsurface materials shall be performed using conventional hand, vacuum and/or compressed air methods. Backhoes and other large equipment will not be permitted for the removal of

pavement or excavation due to the dimensional limits of the test holes. All excavations and removals shall correspond to the limits as stated above.

All pavement and subsurface materials excavated as part of the work shall be removed from the jobsite and disposed of in accordance with the requirements of Federal, State, County, GUC, and all applicable environmental regulations.

Restoration of surfacing for test holes shall be in accordance with 3.16 Pavement and Concrete Replacement.

Measurement and Payment

The excavation and restoration of test holes, including asphalt and concrete restorations, are considered incidental and will not be measured for payment. The cost of any and all equipment and labor required for excavation and restoration of the test holes shall be included in the unit prices bid for the various pay items of the work.

3.13.3 Required Clearance

All gas mains shall be installed such that a minimum of twelve (12) inches, or as otherwise specified by the ENGINEER or detailed on the Plans, horizontal and vertical clearance is maintained from all other existing underground utilities and/or structures, thereby permitting proper routine maintenance and protection against damage which may result from proximity to the utilities and/or structures.

3.13.4 Alignment

All gas mains shall be installed true to the horizontal and vertical alignment indicated on the Plans and Contract Documents, or as otherwise directed by the ENGINEER. The CONTRACTOR shall make no deviations to the proposed horizontal and/or vertical alignment of the gas mains unless otherwise directed to do so by the ENGINEER.

In such cases where the proposed horizontal and/or vertical pipeline alignment will cause conflict with other utilities and/or structures, or result in less than the specified minimum clearance or cover, the ENGINEER shall be notified and the pipeline relocated as per his direction. Any and all costs associated with such changes will be paid for at the unit prices bid for the required equipment, incidental material and labor. No additional payments will be made for such work.

3.13.5 Required Cover

Typically, all gas mains shall be installed with a minimum cover of thirty-six (36) inches and a maximum cover of forty-eight (48) inches between the top of the main and the finished grade. The depth shall be continuous along the length of the mains.

The CONTRACTOR may, upon the approval of or at the direction of the ENGINEER, install the pipe with greater cover than the specified maximum, based on subsurface utility(s) locations and other field conditions.

3.13.6 Direct Burial

The CONTRACTOR shall, unless otherwise indicated on the Plans, specified herein or as directed by the ENGINEER, install all gas mains and associated facilities by direct burial.

Direct burial of the gas mains and associated facilities shall include, but not be limited to: clearing and grubbing, trench excavation (trenching), rock excavation (as required), trench stabilization (as required), lowering and laying pipe, bedding as required, and backfilling, as described herein.

Measurement and Payment

Direct burial installation of gas mains will be measured for payment based upon the linear footage of pipe installed. Pipe will be measured horizontally and through in-line fittings, valves and specials.

Direct buried pipe in-place will be paid for at the unit price bid. The bid price shall include the cost of any and all incidental materials, equipment and labor required for pipe laying operations, including: trench excavation; temporary trench stabilization; installation of the pipe, elbows, tees, reducers, transition fittings, sleeves, couplings, end caps, plugs, locating devices; pipe bedding; select fill; backfill; testing; purging; temporary pavement patches; seeding and mulching; and cleanup.

Payment for installed pipe may be requested only after backfilling and testing operations have been completed and cleanup is in progress.

3.13.6.1 Clearing, Grubbing and Tree Removal

The CONTRACTOR shall clear all brush and timbers located along the alignment of the proposed pipeline, and properly dispose of such, off-site, in a prompt manner prior to commencing trenching operations.

In all cases where cultivated shrubbery, trees or otherwise valuable timber exists along the proposed pipeline route or right-of-way, the ENGINEER shall reserve the right to require the CONTRACTOR to adjust the alignment of the pipe or use an approved alternative method of installation which will not damage said shrubbery, trees or timber.

Measurement and Payment

Clearing, grubbing and tree removal operations which can be reasonably and effectively accomplished with a bush hog or standard trenching equipment are considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for such clearing, grubbing and tree removal, as specified herein, shall be included in the unit prices bid for the various pay items of the work.

Since the GUC does not anticipate any clearing operations which will required the removal of larger timber, the clearing and removal of large trees, stumps, etc., which may not be accomplished using a bush hog or standard equipment will be considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for such clearing, as specified herein, shall be included in the unit prices bid for the various pay items of the work.

3.13.6.2 Trenching

Trenching shall include all excavation necessary to prepare the ditch for the pipe to be installed regardless of what means or methods are necessary to produce such ditch. All trench excavation operations shall be performed in accordance with 29 CFR 1926, Subpart P - Excavations.

Prior to trenching, the CONTRACTOR shall verify the existence, location, elevation and orientation of all underground and aboveground facilities within the vicinity of the work, in accordance with 3.13.1 Location of Other Utilities. The CONTRACTOR shall exercise care in the vicinity of any and all such obstructions.

The trench shall be excavated to a depth that will provide the minimum required cover, as specified in 3.13.5 Required Cover.

The width of the trench shall conform to the dimensions as detailed on the Plans and shall be wide enough to permit backfill to be tamped around the pipe(s) so that voids between pipe and backfill do not occur. Special care must be exercised to be certain there are no longitudinal voids beneath the pipeline.

The trench shall be excavated in a manner that offers smooth, firm and continuous support along the entire length of the pipeline. All sharp objects and debris shall be removed from the trench or the pipe shall be bedded with sand or clean fill to protect the pipe. A minimum of six (6) inches of pipe bedding shall be required in such locations. Where pipe bedding is required, the trench shall be over-excavated to a depth that will provide the minimum required cover, as specified in 3.13.5 Required Cover.

Whenever wet or otherwise unsuitable material, which is incapable of properly supporting the pipe, as determined by the ENGINEER, is encountered in the trench bottom, such material shall be over-excavated as directed by the ENGINEER to a depth necessary to allow for construction of stable pipe bedding. The over-excavated portion of the trench shall then be backfilled with select fill to proper grade to provide the minimum required cover, as specified in 3.13.5 Required Cover.

Unless determined unacceptable by the ENGINEER for backfilling operations, the CONTRACTOR shall store all excavated materials adjacent to the excavated trench for use in the backfilling operations.

No more than five hundred (500) continuous feet of trench may be open on any single project at any one time without approval from the ENGINEER.

Measurement and Payment

Trench excavation is considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for trench excavation, as specified herein, shall be included in the unit price bid for direct burial installation of the appropriate size/type pipe.

Select fill material required for adequate pipe support and where wet or otherwise unsuitable material is encountered will be measured for payment in cubic yards of material placed. Payment will not be based on delivered volumes or delivery tickets, unless specifically authorized by the ENGINEER. The ENGINEER shall verify the amount of select fill prior to payment. Select fill material placement will be paid for at the unit price bid and shall include the cost of any and all equipment, material and labor required for select fill placement as described above.

Where the CONTRACTOR is directed by the ENGINEER, the CONTRACTOR will provide extra depth trench excavation for direct burial of pipe. Compensation for extra depth shall only be made when the excavation

required is in excess of sixty (60) inches and shoring equipment is utilized for the installation of the pipe.

Extra depth trench excavation will be measured and paid for in units of feet of depth per linear foot of pipe (FT/LF) for all of the excavation exceeding sixty (60) inches when shoring equipment is utilized. Extra depth trench excavation will be paid for at the unit price bid and shall include the cost of any and all equipment and labor required for extra depth trench excavation.

3.13.6.2.1 Blasting

Blasting will not be permitted for this project.

3.13.6.3 Trench Stabilization

Where the depth of the trench and/or the type and condition of the soil requires stabilization, the CONTRACTOR shall provide a method of trench stabilization as directed and approved by the ENGINEER.

All materials and installation methods required for shoring, sheeting, bracing and any other required means of trench stabilization shall conform to any and all requirements of 29 CFR 1926 and applicable appendices.

Trench stabilization system members shall be securely connected together and installed in a manner that prevents sliding, falling, kickouts or other predictable failures of the trench sides. Support systems shall be installed and removed in a manner that protects employees from all forms of trench failure or from being struck by members of the support system.

Cross braces installed above the pipe to support the sheeting shall be removed only after pipe embedment has been completed.

Where trench sheeting is required to be left in place, as directed by the ENGINEER, such sheeting shall be cut-off at a minimum of three (3) feet below finished grade and the cut-off portion removed from the trench. Sheeting left in place shall not be braced against the pipe, but shall be supported in a manner that will eliminate concentrated loads and horizontal thrusts on the pipe.

Measurement and Payment

Trench stabilization measures are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for the installation and maintenance of any required temporary trench stabilization measures shall be included in the unit price bid for extra depth trench excavation.

3.13.6.4 Lowering and Laying Pipe

Belt slings and/or padded calipers, which are sized to the particular pipe being laid, shall be used to handle the pipe provided such slings or calipers are free of all characteristics which might damage the pipe.

Inspection of the trench shall be made by the CONTRACTOR prior to lowering the pipe to ensure that no rocks or other sharp objects that may damage the pipe are located within the trench.

When polyethylene pipe is laid in the trench, sufficient slack in the placed pipe should be provided to allow for the contraction of the placed pipe.

When piping is lowered into the trench, care shall be exercised to avoid over stressing or buckling the piping or imposing excessive stress on the joints.

Anchors and supports shall be provided as directed and where required for fastening work into place.

Where the work is suspended, at night or for any other reason, the open ends of the pipe shall be securely plugged or closed to prevent entrance of water and other foreign material.

Measurement and Payment

Pipe lowering and laying operations are considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for lowering and laying pipe shall be included in the unit prices bid for the various pay items of the work.

3.13.6.5 Backfilling

Backfilling operations shall include the furnishing of all labor, materials and equipment necessary for the backfilling and compaction of all trenches, bellholes, and excavations over the entire length of the pipeline, as specified herein.

Trenches shall not be backfilled until the pipe has proper cover, bedding and smooth, firm and continuous support along the entire length of the pipe, as specified in 3.13.6.2 Trenching.

The trench shall be backfilled as soon as possible after the pipe has been properly placed.

Where the trench crosses driveways, roads, streets, or other places used for the travel of vehicles or pedestrians, proper care shall be taken so as not to impede the flow of traffic. All traveled ways, including driveways; walks, streets, or alleys crossed by the trench shall be compacted by mechanical means at +/- 20% of optimum moisture content to 95% of the theoretical maximum density as determined in accordance with the requirements of VTM-1. Where deemed necessary, the ENGINEER may elect to have density tests performed on the backfilled trench by an independent contractor or consultant at the GUC's expense.

Unsuitable material encountered during trench excavation shall not be used as backfill. Unsuitable material shall be removed to the limits established by the ENGINEER and replaced with select fill, as specified herein.

All backfill material shall be free from all objects that might damage the pipe. Wherever it is deemed necessary by the ENGINEER, hand labor shall be used in starting the backfill. The backfill placed from the bottom of the ditch to the top of the pipe shall be placed in the trench simultaneously on both sides of the pipe for the full width of the trench in layers not to exceed six (6) inches in depth. The backfill material shall be thoroughly compacted under and on each side of the pipe to provide solid backing against the external surface of the pipe and to remove all voids. The trench may be backfilled from one foot above the pipe to the top of the trench with mechanical equipment provided the machine is operated parallel to the trench, and the material is placed in the trench in layers not to exceed six inches for the full width.

The CONTRACTOR shall use materials removed during the excavation operation for the backfilling operation, unless these materials are unsuitable as determined by the ENGINEER.

All trenched construction shall be adequately compacted by means of rolling, tamping with mechanical rammers, or hand tamping such that no future settlement of the trench backfill will occur. If vibratory rollers are used for backfill compaction, vibratory motors shall not be activated until at least three (3) feet of backfill has been placed and compacted around the pipe. Flooding shall not be permitted as a means of backfill consolidation. Backfill

compaction achieved by means of driving any type of construction equipment and/or vehicles, other than those specifically designed for trench compaction work, across any part of the trench shall not be permitted. The CONTRACTOR shall place additional fill soil and compact backfill areas where settlement occurs.

Measurement and Payment

Backfilling operations are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for the completion of backfilling operations, shall be included in the unit prices bid for the various pay items of the work.

3.13.7 Directional Drilling

The CONTRACTOR may, upon the approval and/or direction of the ENGINEER, choose or otherwise be directed to utilize directional drilling as an alternative method of installing the polyethylene gas mains.

Prior to commencing directional drilling operations, the CONTRACTOR shall be required to provide proof to the ENGINEER that the personnel performing the drilling operations have a minimum of one year of experience performing directional drilling operations of this type.

All directionally drilled gas main shall be installed in accordance with 3.12 Bending of Pipe; 3.13.3 Required Clearance; 3.13.5 Required Cover; and all other applicable requirements specified herein.

The length of each continuous directionally drilled installation shall be limited by the size and type of drilling equipment utilized for the operation, or as otherwise determined by the ENGINEER.

A minimum of one (1) bellhole per drilled section shall be excavated around the pipe to verify its location, depth and structural integrity. The sending and receiving pits for the directional drilling operation shall not be considered as part of the required number of inspection bellholes.

Tracer wire shall be installed along with all directionally drilled polyethylene pipes. Tracer wire installation shall be in accordance with 3.13.10 Pipe Locating Devices.

Measurement and Payment

Directionally drilled mains will be measured for payment based upon the linear footage and diameter of pipe installed. Pipe will be measured horizontally and through all in-line fittings.

Directionally drilled pipe in-place will be paid for at the unit price bid for the appropriate diameter polyethylene pipe. The cost of any and all equipment, incidental materials and labor required for directional drilling operations, including: excavating and backfilling sending and receiving pits and inspection bellholes; directionally drilling the mains and fittings; testing and purging; and restoration shall be included in the unit price bid.

The cost of any and all equipment, material and labor required for the removal, disposal, and restoration of bellhole pavement shall be paid for at the unit prices bid for bellhole pavement removal and disposal, and for restoration.

3.13.7.1 Equipment

The directional drilling system/equipment used for pipe installation as specified herein shall be subject to the approval of the ENGINEER and shall incorporate the following features:

1. The system shall be remotely steerable permitting control of horizontal and vertical alignment within a window of \pm two (2) inches.
2. The system shall provide for electronic monitoring of horizontal and vertical alignment. The locating tool shall be calibrated daily to an accuracy of \pm two (2) inches.
3. The system shall be capable of turning 90° in a radius of 160 feet.
4. The system may utilize an inert and environmentally risk free drilling fluid. No toxic or otherwise hazardous chemical additive shall be added to the drilling fluid.
5. Back reaming bits shall be of a diameter at least two (2) inches larger than the outside diameter of the pipe to be installed.

Drilling equipment shall be fitted with a permanent alarm system capable of detecting an electric current. The system shall have an audible alarm to warn the operator when the drill head nears electrified cables.

3.13.7.2 **Procedure**

The leading end of the pipe shall be capped prior to insertion through the boring hole or sleeve.

A “weak link” shall consist of a 3 ft. section of one size smaller PE pipe. The “weak link” shall be connected between the leading end of the pipe being pulled and the connection to the directional drill rods.

If the weak link breaks or is otherwise substantially damaged, as determined by the ENGINEER, during installation, the drilling operation shall be abandoned and new undamaged piping reinstalled at the CONTRACTOR’s expense. No payment will be granted for the abandoned section(s) of pipe.

The leading six (6) feet of the installed pipe shall be pulled through the receiving pit and inspected. If any abrasions, gouges or cuts are present which, in the opinion of the ENGINEER, may compromise the integrity of the pipe, the pipe shall be exposed back to the point where the damage originated. All damaged pipe that is determined by the ENGINEER to be unacceptable shall be removed and replaced at the CONTRACTOR’s expense.

All fused joints contained within the polyethylene piping to be installed by directional drilling shall be allowed to cool down in accordance with the manufacturer’s recommended fusion procedures prior to commencing the pulling operation.

PE pipe installed by directional drilling shall be allowed to relax a sufficient length of time, as determined by the ENGINEER, prior to joining to connecting mains.

3.13.8 **Plowing**

When the integrity of the pipe will not be compromised, polyethylene gas pipe may be installed by plowing as an alternative means of installation. Plowing shall not be allowed in rocky soils, congested areas, or any other areas deemed inappropriate by the ENGINEER. The ENGINEER will make all determinations as to where the CONTRACTOR shall be allowed to plow-in pipe.

The CONTRACTOR shall be allowed to plow-in sections of pipe three hundred (300) feet or less in length at a time. The pipe shall be inspected at sufficient intervals, by means of bellholes, and at all exit holes to determine the condition of the pipe. A minimum of one bellhole, located at the midpoint of the plowed segment, shall be required for inspection purposes. Stretched, gouged, scratched, kinked or cut pipe will not be accepted. If damage to the pipe is noted, the earth shall be excavated

away from the pipe in both directions until the full extent of the damage is exposed to the satisfaction of the ENGINEER. The damaged pipe shall then be cut out and replaced at no additional cost to the GUC.

Polyethylene pipe shall be allowed to relax for a sufficient length of time, as determined by the ENGINEER, prior to joining sections of plowed-in pipe or making tie-ins to existing mains. Sections of plowed-in pipe to be joined or tied into existing mains shall be sufficiently overlapped in the tie-in bellholes to allow for shrinkage due to relaxation of the pipe. Fused joints shall be allowed to cool for a minimum of twenty (20) minutes prior to being installed by plowing.

Tracer wire shall be installed along with all plowed in polyethylene pipe. Tracer wire installation shall be in accordance with 3.13.10 Pipe Locating Devices.

Measurement and Payment

Installation of polyethylene gas mains by plowing will be measured for payment based upon the linear footage of appropriate diameter pipe being installed.

Plowed-in pipe in-place will be paid for at the unit price bid. The bid price shall include the cost of any and all equipment, incidental materials and labor required for plowing operations, including: excavating and backfilling exit holes and inspection bellholes; plowing in the pipe and associated fittings; locating devices, testing, purging, seeding and mulching, and cleanup.

3.13.9 Boring

The CONTRACTOR may, upon the approval and/or direction of the ENGINEER, choose or otherwise be directed to bore the gas mains beneath certain traveled ways and/or watercourses.

All boring methods shall be subject to the approval of the ENGINEER, and may include: dry boring, boring and jacking, auguring, pushing, and piercing.

The boring methods and equipment utilized shall be industry proven and accepted, subjected to the approval of the ENGINEER. All employees of the CONTRACTOR utilized in boring operations shall be trained and experienced with the specific boring method and equipment chosen. The CONTRACTOR shall, as required, provide the ENGINEER with documentation of said training and experience.

All boring equipment utilized shall be properly sized to install the carrier pipe without removing any excess spoil. The diameter of the auger used in any boring operation shall not, in any case, be greater than four (4) inches larger than the outside diameter of the casing or carrier pipe to be installed.

Boring operations shall be performed in such a manner that settlement, displacement, distortion, or any other damage to the existing ground surface, utilities and or structures will not occur. Where a utility is damaged or severely displaced, the authority having jurisdiction over the utility or structure shall be contacted immediately. The CONTRACTOR shall be responsible for promptly repairing or having repaired any such damage, to the ENGINEER's and the affected utility owner's satisfaction, at no cost to the GUC.

Boring operations shall, at all times, be conducted in a manner that does not create a hazard or impede the flow of traffic.

Carrier pipe installation shall be performed immediately upon completion of the boring operation. Soil voids that remain around the pipe after installation shall be properly filled with hydraulic cement grout, as directed by the ENGINEER. The grout shall be placed under pressure in a manner approved by the ENGINEER.

The CONTRACTOR shall, as directed, repair or replace, at his own expense any pipe that is damaged during boring operations.

If the bored carrier pipe strikes an obstruction during the boring operation, the cost of removing the obstruction shall be borne by the CONTRACTOR. If the obstruction cannot be removed, the boring operation shall be: abandoned; the pipe filled with cement grout, plugged and abandoned in place; and the bore re-attempted at a different location, as directed by the ENGINEER. The CONTRACTOR shall be responsible for any and all costs associated with an abandoned bore. No payment will be allowed for the abandoned section(s) of pipe.

When, in the opinion of the ENGINEER, a completed bore results in a deficiency which renders the pipe unusable, including but not limited to: insufficient cover; insufficient clearance with existing underground utilities and/or structures; excessive curvature of the pipe; excessive damage to the pipe and/or coating; or failure to stay within the right-of-way, the bore shall be abandoned; the pipe filled with cement grout, plugged and abandoned in place; and a new bore completed at no additional cost to the GUC.

The lengths of all required bores shall be as shown on the Plans or as otherwise directed by the ENGINEER. The typical allowance of five (5) feet outside of the edge of pavement or travel area outside of the roadway being bored will be provided for installation of pipe by bore methods.

Tracer wire shall be installed along with all polyethylene carrier pipes bored without a casing pipe. Tracer wire installation shall be in accordance with 3.13.8 Pipe Locating Devices.

Measurement and Payment

Gas mains installed by boring the pipe in-place will be measured for payment based upon the linear footage of pipe installed. The pipe will be measured horizontally and through in-line fittings and specials.

Boring will be paid for at the unit price bid. The cost of any and all equipment, incidental material and labor required for boring, including: excavating and backfilling sending and receiving pits; boring the main and fittings; testing and purging; and restoration, shall be included in the unit price bid.

Payment shall be made based upon the minimum required length of bore. Bored distances in excess of the minimum required length shall not be paid for as boring, but shall be paid for at the unit price bid for direct burial of the appropriate size/type pipe.

Payment for pavement replacement shall be in accordance with 3.16 Pavement and Concrete Replacement.

3.13.9.1 Casing Pipe Installation

The CONTRACTOR may be required to install the gas mains within a steel casing pipe by boring, as indicated on the Plans or as otherwise directed by the ENGINEER in accordance with 3.13.9 Boring.

The casing pipe shall be a minimum of two (2) nominal pipe sizes larger than the carrier pipe.

The casing pipe shall be installed true to line and grade; sloping to one end with an even bearing throughout its length. The casing pipe installation shall be made so as to allow free and unrestricted movement of the carrier pipe during installation.

Lengths of steel casing pipe shall be joined by welding the joints completely around the circumference of the pipe.

Casing pipe vent(s) shall be installed at the end(s) of the casing pipe as directed by the ENGINEER. The vents shall be painted above grade with a corrosion resistant primer paint as directed by the ENGINEER. The vent opening(s) shall be screened and turned downward. Approved gas warning signs shall be attached to the vent pipe(s) or placed immediately adjacent to the casing vent(s) at each end of the casing pipe.

Both ends of all casing pipe installations shall be sealed. Sealed casing shall have a minimum of one (1) two (2) inch vent welded on the casing before the carrier pipe is inserted.

Casing spacers shall be set within one (1) foot of each end of the casing and placed along the carrier pipe at a maximum spacing of ten (10) feet.

The casing pipe shall be prepared to the extent necessary to remove any sharp edges, projections, or abrasive material which could damage the polyethylene pipe during and after the insertion. Polyethylene pipe shall be inserted into the casing pipe in such a manner so as to protect the polyethylene pipe from damage. The leading end of the polyethylene pipe shall be capped prior to insertion.

Measurement and Payment

Casing pipe installation will be measured for payment based upon the linear footage of casing pipe and carrier pipe installed horizontally between the ends and includes casing vent pipes, carrier pipe spacers, and casing end seals.

Casing pipe installed by bore with carrier pipe inserted will be paid for at the unit price bid. The cost of any and all equipment, incidental materials and labor required for the installation of casing pipe by bore, including: excavation and backfilling of sending and receiving pits, boring the casing pipe; installation of vent pipes, installation of casing/carrier pipe spacers, installation of ends seals, insertion of carrier pipe, testing and purging, and restoration, shall be included in the unit price bid.

The cost of any and all equipment and labor required for the removal, disposal, and restoration of pavement shall be paid for at the unit price bid for pavement removal and disposal and for pavement restoration.

No additional payment will be made for the substitution of a larger diameter casing pipe.

3.13.10 Pipe Locating Devices

The CONTRACTOR shall install tracer wire with all uncased polyethylene pipes to facilitate location of the pipe with commercially available electronic pipe locators. Warning tape shall also be installed with all direct buried mains and shall be continuous over the length of the mains. Installation of tracer wire and warning tape shall be as included in Table 3.13.10

**TABLE 3.13.10
INSTALLATION OF LOCATING DEVICES**

Method of Construction	Tracer Wire Location	Warning Tape Location
Direct Bury	6" Min./12" Max. Above Pipe	Not Required
Directional Drill	Pull Through Bore Hole With Pipe	Not Required
Plowing	6" Min./12" Max. Above Pipe	Not Required
Bored	Pull Through Bore Hole With Pipe	Not Required

The tracer wire shall be installed a maximum of twelve (12) inches above the pipe and a minimum of six (6) inches above the pipe for direct bury and plow-in installations. The locating tape shall be installed approximately six (6) to twelve (12) inches below finished grade.

Measurement and Payment

Unless specifically outlined below, all work associated with the installation of pipe locating devices is considered incidental and will not be measured for payment. The cost of any and all equipment, incidental material and labor required for the installation of pipe locating devices shall be included in the unit prices bid for the various pay items.

3.13.10.1 Electrically Conductive Tracer Wire

The CONTRACTOR shall be required to install an electrically conductive tracer wire (tracer wire) as a means of facilitating the location of buried or inserted polyethylene pipe. The tracer wire insulation color shall be yellow for gas.

When polyethylene pipe is installed by boring without a casing pipe, the tracer wire or locating tape shall be attached to the bull-nose in order to facilitate installation.

The tracer wire shall be pulled into each locating station with sufficient slack to extend a minimum of twenty-four (24) inches above finished grade. The tracer wire shall not be cut, but should remain continuous.

In the event that the continuity of the tracer wire is broken during installation, the CONTRACTOR shall install, at no additional cost to the GUC, a replacement tracer wire by either open trenching or plowing, as directed by the ENGINEER. Prior to the completion of the project, the ENGINEER may perform a continuity test. If the test determines that there are disruptions to the continuity, the CONTRACTOR shall excavate and repair the damaged wire at no expense to the GUC.

Tracer wire shall not be mechanically fastened to the pipe.

Under no circumstances shall the tracer wire be wrapped around the polyethylene pipe.

Where new tracer wire is connected to existing tracer wire or where separate spools of tracer wire are connected, the tracer wire shall be spliced using an approved mechanical split bolt connector or an approved waterproof splicing kit. These connections shall be wrapped using splicing tape and/or plastic electrical tape in order to waterproof the splice. Tracer wire shall be spliced to locating tape using splice clamps as approved by the locating tape manufacturer, or an approved equal.

3.13.10.2 Locating Stations

Locating stations shall be installed at all locations indicated on the Plans, or as otherwise directed by the ENGINEER. When a locating station is installed at a lateral connection, the station shall be installed directly over the center of the tee or lateral branch connection. Locating stations shall be installed behind the curb and gutter or outside of the roadway at all locations other than lateral connections and intersections.

Locating station installations shall include valve boxes (top section only) and a lid. The valve box lid shall be marked "TEST" or "T".

Locating station installation shall include excavating, setting of the valve box sections(s), coiling the tracer wire into the box, properly setting the valve box lid, backfilling and compacting around the box, and restoration.

When locating stations are not installed over the main or fitting, the tracer wire shall be installed inside one-half ($\frac{1}{2}$) inch or one (1) inch polyethylene tubing and the tubing shall terminate at a point between twelve (12) inches and six (6) inches below the top of the valve box.

Measurement and Payment

Locating station installations will be measured for payment based upon the number installed.

The unit price bid shall include the cost of any and all equipment, incidental material and labor required for locating station installation, as described above.

3.14 Abandonment of Existing Facilities

The CONTRACTOR shall, as indicated on the Plans or as otherwise directed by the ENGINEER, be required to remove from service certain sections of the existing gas distribution facilities, including but not limited to: mains, fittings, valves and valve boxes.

Abandonment of existing facilities shall be accomplished by either in-place abandonment or complete removal of these facilities, as indicated on the Plans or otherwise directed by the ENGINEER.

In-place abandonment shall consist of: restraint of existing facilities, disconnection of the facilities from the existing system; purging of natural gas from all gas mains; properly sealing the ends of all abandoned pipe; backfilling all exposed portions of abandoned pipe; removing top section of abandoned valve boxes and backfilling with sand and asphalt; and restoration of the affected area as directed by the ENGINEER.

Sealing of natural gas mains shall be accomplished using an appropriate welded or fused fitting to the open end(s) as directed by the ENGINEER. For abandonment of two (2) inch and smaller diameter mains, the CONTRACTOR shall use an internal rubber-based compression stopper.

Valves and valve boxes shall be abandoned in place, unless otherwise directed by the Plans or the ENGINEER. The abandonment shall not be performed until the abandonment of the

main is complete. A one (1) foot square hole shall be cut around valve boxes located in the pavement or concrete and the CONTRACTOR shall render the valve inoperable by breaking off the top section of the valve box a minimum of six (6) inches below the surface of the surrounding pavement or grade and filling the valve box with the same material (asphalt, concrete, dirt, etc.) directly adjacent to the valve box. Compaction of the material used to fill the valve box shall be completed such that settlement will not result. Asphalt shall be compacted with an approved roller or vibratory plate.

Purging of gas mains shall be performed, as directed by the ENGINEER, with compressed air and shall continue until a reading of zero (0) percent gas is measured using an approved, calibrated combustible gas indicator (CGI). **All purging operations shall be done under the direct supervision of the ENGINEER. A minimum of eight (8) hours advance notice shall be provided to the ENGINEER.**

Detailed information concerning all abandoned facilities, including, but not limited to; size of pipe, length of pipe abandoned, fittings installed, etc. shall be collected and submitted to the ENGINEER by the CONTRACTOR for all projects.

The CONTRACTOR shall be required, as directed by the ENGINEER, to return various abandoned distribution facility components to the GUC in working condition.

Measurement and Payment

In-place abandonment of existing distribution facilities is considered incidental work and will not be measured for payment. The cost of any and all equipment, incidental material and labor required for in-place abandonment operations shall be included in the unit price bid for the various pay items of the work.

3.14.1 Removal of Facilities

The work covered by this Contract shall require the CONTRACTOR to remove sections of abandoned piping, valves, and valve boxes.

After isolating and purging, the facilities shall be removed from the ditch and the ditch shall be backfilled and compacted. Compaction shall be equal to that of the surrounding soil or as otherwise specified on the project Plans or as required by the ENGINEER. Compaction within traveled ways, including driveways, sidewalks, streets or alleys shall meet the density requirements as specified in Section 3.13.6.5 Backfilling. Following backfilling and compaction, the surface shall be graded to match the existing grade and contour. Removed piping and materials shall be properly disposed of or otherwise handled as directed by the ENGINEER.

The CONTRACTOR shall be required to remove short sections of piping at tie-in locations, at the direction of the ENGINEER or as deemed necessary by the

CONTRACTOR, to facilitate tie-in operations. Additionally, removal of pipe will only be required where indicated on Plans, or as directed by the ENGINEER.

Measurement and Payment

Abandonment of facilities by removal is considered incidental and will not be measured for payment. Seeding, mulching and tacking of the surface are considered incidental and shall not be measured for separate payment.

The cost of any and all equipment, material and labor required for the removal, disposal, and restoration (including seeding, mulching and tacking of the surface) shall be included in the unit prices bid for various pay items of the work. Pavement removal/disposal and replacement, where necessary, will be paid for at the respective unit prices bid for this work.

3.15 Clean Up

The CONTRACTOR shall keep the right-of-way reasonably clear of construction debris during the progress of the work. Cleanup shall consist of all work necessary to restore the affected area to pre-construction condition. This operation shall include, but not be limited to, the removal of excess excavated materials, equipment, rock and other materials that cannot be placed in the trench backfill. Cleanup shall also consist of the repairing or restoration of trenches, restoration to pre-construction topography, disposal of vegetative debris and re-seeding and mulching as directed by the ENGINEER, in accordance with the NCDOT Specifications.

The CONTRACTOR will keep all paved surfaces clear of soil (compacted or loose) and loose gravel or stone. When a mechanical sweeper is used, the sweeper attachment shall be covered to minimize dust and shall utilize a wet sweeper system.

Finish grading shall be performed as necessary to re-establish slopes. The grades shall be formed to easy contours sloping towards inlets and ditches. This grading shall eliminate low spots and pockets that do not drain. Ditches shall be excavated to the section and elevations shown and shall be excavated with smooth slopes to avoid low spots and pockets that do not drain.

Developed property including but not limited to walks, steps, fences, mailboxes, paper boxes, disturbed by the work shall be restored or replaced to their original or better condition, except as shown on the Plans or directed by the ENGINEER. Ditches shall be restored to their original shape and slope. All disturbed areas not covered by pavement or structures shall be fertilized, limed, seeded, and mulched. Any washing or erosion of the surface, and any areas where grass seed does not germinate, shall be repaired and reseeded until an adequate stand of grass is achieved.

The CONTRACTOR shall be required to dress-up all work areas daily. The daily dress-up shall include backfill and compaction, removal of rocks and large dirt clods, raking to a consistent grade, removal of construction materials and debris, providing and placing a straw covering as required, and providing and placing soil stabilization measures as required by the ENGINEER. Final cleanup and restoration shall be performed within five working days of completion of all work within individual properties or sections of properties as designated by the ENGINEER. The work required prior to final cleanup and restoration shall include the installation and activation of the distribution mains and the completion of all required abandonments. This cleanup shall continuously follow, as described above, to the ENGINEER's satisfaction. Untimely cleanup resulting from the pipeline construction activities may result in the suspension of new construction, as deemed necessary by the ENGINEER.

Measurement and Payment

Cleanup operations are considered incidental work and will not be measured for payment. The cost of any and all equipment and labor required for cleanup shall be included in the unit prices bid for the various pay items of the work.

3.16 Pavement and Concrete Replacement

Within ten (10) days of the completed installation of the mains, the CONTRACTOR shall be required to re-pave or otherwise restore, as directed by the ENGINEER, all surfaced roadways and driveways and all concrete structures damaged by the construction. All restoration work within the City of Greenville or NCDOT rights-of-way shall be performed as specified herein, as directed by the ENGINEER and to the satisfaction of NCDOT or the City of Greenville Department of Public works.

The CONTRACTOR shall replace roadway, driveway and walkway surfaces necessarily removed for the installation of the mains. It is the intent of these Specifications that the CONTRACTOR returns all paved surfaces affected by the work to as near pre-construction condition as possible in conformance with approved methods.

The CONTRACTOR assumes all responsibility for the restoration of pavement, and for safely maintaining the pavement cuts and normal traffic flow until final restoration is complete.

No asphalt paving shall be performed unless the atmospheric temperature is above 40° Fahrenheit. Where required, rolling shall be performed with an approved 10-ton roller. Hand operated vibratory plate equipment will not be allowed for finishing work on the surface course.

In all cases, the type of paving section used, as outlined below, shall be as directed by the ENGINEER prior to commencing paving operations.

Measurement and Payment

Replacement of asphalt pavement along standard mainline trenchlines utilizing the standard paving section, as described below, will be measured for payment in units of linear feet and paid for at the unit price bid for this pay item.

Replacement of asphalt pavement along standard bellholes utilizing the standard paving section, as described below, will be measured for payment in units of square feet and paid for at the unit price bid for this pay item.

Payment for pavement section replacement shall be limited along the trenchline to a width equal to the maximum trench widths allowed in Item 3.17 Pavement and Concrete Replacement. Paving of tie-in bellholes, bore pits, push pits, etc. will be limited to the minimum pit size required to complete the work. The cost of any and all equipment, material and labor required for the complete restoration of the asphalt pavement, as specified herein, shall be included in the unit price bid.

No additional payment for pavement replacement will be granted for any work or quantities in excess of the trench and bellhole limits as described in 3.9 Pavement Removal and Disposal without the approval of the ENGINEER.

Payment for pavement section replacement of test holes shall be in accordance with 3.13.1.1 Test Hole Excavations.

The stone subgrade will not be measured for payment and should be included in the cost of the asphalt replacement. Payment will not be granted to the CONTRACTOR for providing and placing excess stone.

Tack and prime coats will not be measured for payment. They are considered incidental to the pavement replacement work and their cost should be included in the CONTRACTOR's unit price bid for the replacement of asphalt restoration.

Only the amount of asphalt necessary to achieve pavement replacement conforming to the above requirements will be measured for payment. Payment will not be granted to the CONTRACTOR for providing and placing excess materials. Payment shall not be granted for surface repair that is in excess of what is reasonable to perform the installation of the pipe.

3.16.1 Standard Roadway Asphalt Pavement Replacement

Within NCDOT right-of-ways, City of Greenville right-of-ways, and where directed by the ENGINEER, roadway pavements shall be restored in conformance with the applicable sections of the NCDOT "Standard Specifications for Roads and Structures", latest edition.

For asphalt pavement replacement within City of Greenville and NCDOT rights-of-way, the pavement section shall consist of two (2) inches of NCDOT S9.5B or S9.5C

Surface Course Mixture and eleven (11) inches of NCDOT B25.0B or B25.0C Base Course over a compacted subgrade.

Proper tack coat placement shall be required for all pavement replacement to insure adequate bonding with the existing adjacent surface. Pavement replacement will not be permitted or accepted where the tack coat has not been properly applied.

Subgrade Preparation: The subgrade preparation shall conform to Section 500 of the NCDOT "Standard Specifications for Road and Structures" (latest edition).

Aggregate Base Course: Aggregate base course shall conform to Section 520 of the NCDOT "Standard Specifications for Road and Structures" (latest edition).

Asphalt Concrete Base Course: The asphalt base course shall conform to Section 610 of the NCDOT "Standard Specifications for Road and Structures", (latest edition), for Asphalt concrete plant mix pavements B25.0B or B25.0C.

Tack Coat: The work shall be performed in accordance with Section 605 of the NCDOT "Standard Specifications for Road and Structures" (latest edition).

Asphalt Concrete Surface Course: The Asphalt Surface Course shall conform to Section 610 of the NCDOT "Standard Specifications for Road and Structures" (latest edition) for Asphalt concrete plant mix pavements S9.5B or S9.5C.

Traffic Markings: The CONTRACTOR shall repair and restore any traffic markings that were damaged during the performance of the work. All repairs shall be in accordance with the requirements and specifications of NCDOT and the MUTCD Manual, (latest edition).

Existing Structures: All existing structures which fall under or near repaired or restored asphalt areas shall be adjusted to final grade prior to application of asphalt concrete.

3.16.2 Gravel and Other Surfacing

Gravel and dirt roadways and driveways shall be repaired and replaced to their original condition, or as otherwise directed by the ENGINEER.

Measurement and Payment

Gravel roadway and driveway restoration shall be measured for payment based on the tons of gravel placed. Excess quantities of gravel shall not be included in the measurement for payment. The cost of any and all equipment, material and labor required for gravel roadway and driveway restoration operations shall be included in the unit prices bid.

Dirt road restoration is considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for dirt roadway and driveway restoration operations shall be included in the unit prices bid for the various pay items of the work.

3.16.3 Sidewalk, Driveway, and Curb and Gutter Replacement

Sidewalks and driveways shall be repaired or replaced to the thickness of the adjacent, undisturbed sections or four (4) inches whichever is greater. Concrete curb and gutter sections shall be replaced to match adjacent curb and gutter sections. The finish shall be floated or broomed to match the existing. Joints shall be tooled to match the spacing of the existing sections.

Measurement and Payment

Concrete sidewalk and driveway restoration costs, directly resulting from the installation of gas facilities, will be measured for payment in units of square yards. The bid price shall include the cost of any and all equipment, material and labor required for concrete restoration, including: the replacement (including: reinforcement, finishing and jointing) of all classifications, thickness', and widths of concrete. Any unnecessary damage to concrete incidental to the work shall be repaired at the CONTRACTOR's expense.

3.16.4 Concrete Structures

Concrete structures, including but not limited to headwalls and drainage structures damaged during construction, shall be promptly and satisfactorily restored to pre-construction condition, as directed by the ENGINEER, in accordance with all North Carolina Department of Transportation.

Measurement and Payment

Concrete structure restoration costs, directly resulting from the installation of water and gas facilities, will be measured for payment in units of cubic yards. Concrete structure restoration will be paid for at the unit price bid. The bid price shall include the cost of any and all equipment, material and labor required for concrete structure restoration, including: the cutting, removal, disposal and replacement (including: reinforcement, finishing and jointing) of all classifications, thickness', and widths of concrete. Any damage to concrete structures incidental to the work shall be repaired at the CONTRACTOR's expense.

End of Section 3

4 SECTION 4 - MATERIALS FOR GAS FACILITY INSTALLATION

Material descriptions are included to provide the CONTRACTOR with information necessary for proper equipment selection and installation procedures. The GUC will provide materials as described in 3.3.1 Equipment, Tools, Labor and Materials To Be Furnished By OWNER.

4.1 Pipe

4.1.1 Polyethylene Gas Pipe

All polyethylene gas pipe shall be PE 2406/2708, medium-density polyethylene. The polyethylene pipe shall be manufactured and tested in accordance with ASTM specification D2513. The minimum material cell classification, as determined in accordance with ASTM D3350 shall be 234363E. All polyethylene pipes shall be Iron Pipe Size (IPS), unless noted as copper tubing size (cts).

PE 2406 polyethylene pipe properties shall be as listed in Table 4.1.1.

**TABLE 4.1.1
 POLYETHYLENE PIPE PROPERTIES**

SIZE (INCHES)	SDR	WEIGHT (LB./FT.)	COIL/STRAIGHT LENGTH (FT.)
¾	11	0.12	Coil
2	11	.063	Coil
4	11.5	2.17	40' (Straight Length)
6	11.0	4.89	40' (Straight Length)
8	11.0	8.28	40' (Straight Length)

High Density Polyethylene (HDPE) pressure pipe shall be installed in the directionally drilled bore as shown on the plans. HDPE pressure pipe shall be furnished complete with all jointing materials and other necessary appurtenances. HDPE pipes shall be Iron Pipe Size (IPS).

HDPE pressure pipe shall conform to the applicable requirements of PE 4710 and shall meet pressure classification and dimension ratios (DR) as indicated in the following table:

<u>Nominal Size</u>	<u>Pressure Class</u>	<u>DR</u>
4"	200 psig	11

4.2 **Pipe Fittings**

4.2.1 **Polyethylene Pipe Fittings**

Polyethylene pipe fittings shall be butt fusion; saddle fusion or electrofusion fittings manufactured by an approved manufacturer and shall be composed of the same material as the pipe, as specified in 4.1.1 Polyethylene Gas Pipe. All one-half (1/2) and one (1) inch fittings must be 0.090 wall thickness copper tubing size (CTS). All fittings larger than one (1) inch shall be SDR 11, iron pipe size (IPS); and SDR 11.5 for 4-inch pipe fittings.

4.2.1.1 **Fabricated Tees**

Polyethylene fabricated tees shall consist of line pipe and a branch saddle fitting. The line pipe shall be similar in length to a standard molded tee. The branch saddle fitting shall be fusion applied, the line pipe tapped through the branch saddle fitting with a full outlet opening, and a section of pipe with a minimum length of twelve (12) inches fused to the outlet of the branch saddle fitting in the manufacturer's facilities. The branch saddle and line pipe shall be composed of the same material as the pipe, as specified in 4.1.1 Polyethylene Gas Pipe.

4.2.2 **Electrofusion Fittings**

Electrofusion fittings shall be manufactured of polyethylene resins compatible with PE 2406/2708, medium-density pipe. The fittings shall be engineered to be used with and meet or exceed the resistance properties of SDR 11, polyethylene pipe.

4.2.3 **Transition Fittings**

Steel to plastic transition fittings shall meet or exceed 49 CFR 192, ASTM D2513 and ASTM A53 specification. The steel portion of the fitting shall be coated with electrostatically applied epoxy and the end shall be beveled for welding and tapered to match the pipe bore. The plastic portion of the fitting shall be composed of the same material as the pipe. The longitudinal pull out strength of the transition from steel to plastic shall exceed the yield factor of plastic pipe.

4.3 **Valves**

All valves to be installed in the gas distribution system shall be wrench operated, low maintenance or no maintenance valves as indicated on the Plans.

4.3.1 **Main Valves**

4.3.1.1 Polyethylene Valves

All main valves shall be polyethylene, full opening, ball type and maintenance free, as manufactured by Nordstrom Valve, Inc. (Polyvalve) or Kerotest (Polytec). The valves shall be composed of the same material as the pipe, as specified in 4.1.1 Polyethylene Gas Pipe. Valve outlets shall be manufactured for butt fusion. The valves shall have factory applied PE 2406/2708 extensions, in conformance with 4.1.1 Polyethylene Gas Pipe above, on both ends. Extensions shall be joined by butt fusion. Fitting SDR shall match pipe SDR.

4.4 Locating Stations and Valve Boxes

Locating station boxes shall be installed to facilitate the location of the mains. Valve boxes shall be installed to facilitate the operation of the valve.

4.4.1 Main Line Valve Boxes and Locating Stations

Locating and valve boxes, extension pieces, collars and covers shall be 2-piece screw type adjustable or 2-piece sliding type adjustable boxes as manufactured by Bingham and Taylor or ENGINEER approved equivalent. Valve box covers shall have the word "GAS" embossed on top. Locating station covers shall have the word "TEST" or "T" embossed on top.

4.5 Other Materials

Special material specifications may be listed on any supplemental Plans or drawings.

The CONTRACTOR shall provide special materials, as directed by the ENGINEER.

End of Section 4

5 **SECTION 5 - GAS DISTRIBUTION FACILITIES INSTALLATION**

5.1 **CONTRACTOR Qualifications**

The CONTRACTOR shall use only competent and skilled workmen for the performance of any and all work on the natural gas distribution system, as specified herein. The workmen shall not perform any heat fusion operations on any pipe or associated fittings within the system until they have been qualified to perform such operations in accordance with the test requirements specified in 5.1.1 Heat Fusion Qualifications.

The CONTRACTOR shall furnish evidence, as required by and to the satisfaction of the ENGINEER, that the specified testing requirements have been met for each employee prior to their utilization on the work.

Measurement and Payment

Qualification of the CONTRACTOR's personnel for heat fusion operations is considered incidental and will not be considered for payment. All costs associated with qualifying the CONTRACTOR's personnel, including but not limited to testing and certification, as specified herein, shall be included in the unit prices bid for the various pay items of the work.

5.1.1 **Heat Fusion Qualifications**

Operators of heat fusion equipment, including: butt fusion, saddle fusion and electrofusion, shall be tested and certified in accordance with the requirements of 49 CFR 192, Subpart F, Paragraph 285 along with any and all additional requirements of the specific pipe and/or fitting manufacturer.

In addition to and in accordance with the requirements above, all personnel performing heat fusion operations shall be certified by the GUC to join polyethylene pipe approved for use as included in Section 4.1.1 Polyethylene Gas Pipe, prior to commencing work, by the following procedures:

Certification: Each technician making joints in polyethylene pipe must provide evidence of current heat fusion certification from an approved pipe manufacturer, pipe vendor, or gas distribution company. Additionally each technician must be qualified by the Gas Superintendent, or designee, before making joints on polyethylene pipe that will be installed in the gas distribution system operated by the GUC.

Testing: Each technician must show proof of satisfactory training and practice in making heat fused joints on polyethylene pipe and fittings. A technician will be tested with the following procedure:

- 1) Make a specimen joint by joining material equal to the material being used which passes visual inspection during and after assembly and is found to have the same appearance as an acceptable joint or photograph of an acceptable joint.
- 2) Specimen is physically tested by cutting into at least three (3) longitudinal strips. Each strip shall:
 - Show no voids or discontinuities or any cut surface in the joint area.
 - Be deformed by bending, torque, or impact and if failure occurs, it must not be in the joint area.

Re-qualification must be completed if during any twelve (12) month period that person:

- (i) Does not make any fusion joints.
- (ii) During the course of the work, any employee of the CONTRACTOR that cumulatively performs three unsatisfactory fuses for incorporation in the natural gas distribution system that are subsequently determined to be unacceptable to the ENGINEER shall not be allowed to perform fusion operations until evidence of re-training from an acceptable source is provided to the ENGINEER.

If the technician performs unsatisfactorily in the fusion of the joints or fittings for which the technician is approved for as indicated on his fusion permit, the GUC reserves the right to revoke his/her permit to fuse polyethylene pipe on the GUC's gas system.

5.2 **Heat Fusion**

All polyethylene pipe and/or fitting connections and other fabrications within the gas distribution system shall be made by heat fusion, unless otherwise directed by the ENGINEER. Heat fusion shall include: butt fusion, saddle fusion and electrofusion.

Measurement and Payment

Heat fusion operations are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for heat fusion operations and inspection thereof, including: heat fusion machines and wind guards, shall be included in the unit prices bid for the various pay items of the work.

5.2.1 **Procedure**

All heat fusion jointing procedures shall be performed in accordance with 49 CFR 192 and any and all recommended Specifications and procedures provided by the pipe and/or fitting manufacturer.

Heat fusion equipment shall, at all times, be protected from damage and kept in good working condition. Fusion equipment that shows signs of deterioration or damage shall be replaced. Heat fusion machines that, in the opinion of the ENGINEER, are in poor repair or are not of sufficient capacity to perform the work shall not be used in conjunction with work on GUC facilities.

Suitable windguards shall be provided to protect the work during periods of excessive wind or cold weather. When the ambient temperature is below 32°F care must be taken to maintain the proper heater plate temperature.

The CONTRACTOR shall, at the direction of the ENGINEER, temporarily suspend all heat fusion operations whenever conditions are not conducive to the performance of good work.

All fused joints and other connections shall be air-cooled. Accelerated cooling by any method shall not be permitted.

Fusion operations on polyethylene pipe shall be performed adjacent to the trench and the pipe lifted and lowered into the trench. Where absolutely necessary to fuse polyethylene pipe at another location than adjacent to the trench, as allowed and confirmed by the ENGINEER, the pipe shall be lifted and carried to the trench. Under no circumstances shall any length or portion of the polyethylene pipe be dragged, slid, pushed or pulled, on any surface to the trench.

5.2.2 **Inspection**

Visual, nondestructive and/or destructive testing procedures shall be implemented, as required by the ENGINEER, to determine the quality of the fused joints.

The ENGINEER may, at his discretion, require nondestructive testing and inspection of any or all fused joints prior to the initiation of backfilling or insertion operations.

The ENGINEER shall make all determinations as to what constitutes an acceptable fused joint as well as the disposition of all defective joints. These determinations shall be made upon completion of a visual inspection. Defective joints shall be

removed from the piping system at the ENGINEER's direction and at no cost to the GUC.

5.3 Valves

Valves shall be installed at all locations indicated on the Plans, or as otherwise directed by the ENGINEER.

Valve installations shall include the valve, complete valve box assembly, any required blocking.

Prior to installation, all valves shall be fully opened and fully closed a sufficient number of times to ensure that all parts are in proper working order.

All polyethylene valves shall be installed below grade by butt fusion, unless otherwise directed by the ENGINEER. Butt fusion operations on polyethylene valves shall be in accordance with 5.2 Heat Fusion.

Valve boxes shall be installed so as not to hinder the operation of the valve.

Valve boxes shall be insulated from the valve by blocking under the valve box with brick, concrete block or suitable masonry material. Similar material shall be used to block under the center of the valve.

Backfill shall be carefully tamped around each valve box to a distance of four (4) feet on all sides of the box, or to the undisturbed trench face if less than four (4) feet, such that the plumbness of the valve box is maintained.

A pre-manufactured concrete collar or a poured in place concrete collar shall be installed around the lid area of each valve box which is installed outside of paved roadways. Each poured in place concrete collar shall be eighteen (18) inches by eighteen (18) inches and shall be composed of concrete capable of reaching a compressive strength of 3000 psi.

All valves shall be in the open position during pressure testing, and shall remain as such upon completion of the tests. **Under no circumstances shall the CONTRACTOR operate any valves within the existing gas distribution system, or otherwise interrupt or restore gas service to any customer. GUC personnel shall perform all valve operations and service restoration, as required.**

Following the complete installation, backfill, testing and acceptance of the valve and valve box assembly, a section of two (2) inch polyethylene pipe shall be placed inside the valve box. The section of polyethylene pipe shall be sufficient in length to be retrieved and removed during the operation of the valve and such that it does not interfere with the normal placement of the lid.

Measurement and Payment

Valve installations will be measured for payment based upon the number installed.

The unit price bid shall include the cost of any and all equipment, incidental materials and labor required for valve installation, including blocking as describe above.

5.4 Pressure and Leak Testing

Each gas main installed within the GUC's distribution system shall be pressure and leak tested, as specified herein. The CONTRACTOR shall provide the necessary materials, labor and pumps required to pressurize the gas main in a satisfactory and efficient manner. **All pressure and leak testing shall be done in the presence of the ENGINEER. Tests done without supervision will not be accepted and the CONTRACTOR shall be required to retest at his expense.**

All PE pipe to be installed by the horizontal directional drilling method shall be pre-tested prior to installation into the borehole. After the crossing pipe has been assembled for the crossing, the CONTRACTOR shall perform a low pressure air pretest. The entire pull section for each crossing shall be subjected to a 15 minute test at no more than 5 psi before installing in the bore hole. Pressure and temperature shall be monitored and recorded with certified instruments during the test.

The preliminary test is a pretest and shall not preclude the requirement for a pressure test of the entire in-place crossing after installation, in conjunction with the pipeline section which contains the crossing. If a leak develops on the final in-place test after installation, CONTRACTOR shall repair such leak at his own expense.

When the length of any pipe section exceeds 1,000 feet, the ENGINEER reserves the right to require the pipe to be tested in sections determined by the ENGINEER.

All new gas mains shall be pressure tested using compressed air or nitrogen. Water shall not be used as a test medium for gas mains. The method and procedure for each pressure test shall be subject to the approval of the ENGINEER.

Natural gas shall not be admitted into any gas main prior to the ENGINEER's approval and the successful completion of all required pressure tests.

Measurement and Payment

Pressure and leak testing operations are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for

pressure and leak-testing operations shall be included in the unit prices bid for the various pay items of the work.

5.4.1 **Preparation**

Prior to testing, each section of two (2) inch or larger nominal diameter main shall be thoroughly cleaned by forcing a pig type mechanical cleaner through the pipe a sufficient number of times to remove all foreign matter which may have been trapped inside the pipe during construction. A minimum of two pig runs shall be required. Mains that have a nominal diameter of less than two (2) inches shall be cleaned by swabbing or by forcing compressed air through the pipe at a sufficient rate such that all foreign matter is removed.

With the exception of certain bellholes required for the installation and operation of testing equipment, each test segment shall be completely backfilled along its entire length prior to testing.

Twenty-four (24) hours prior to commencing any testing operations, the CONTRACTOR shall submit a test schedule to the ENGINEER for approval.

5.4.2 **Procedure**

After the pipe has been prepared in accordance with 5.4.1 Preparation, pressure and leak tests shall be performed as specified herein in accordance with 49 CFR 192, Subpart J.

Pressure testing procedures shall not be initiated until at least twenty minutes after the last fused joint has been completed.

All pressure tests shall be monitored by means of chart recording devices with an attached pressure gauge located, as directed by the ENGINEER, along the main(s) to be tested. The chart recording devices shall be capable of recording the sustained test pressure for the duration of the test. The gauge shall be liquid filled and capable of measuring pressures to a minimum of one hundred (100) psig. The CONTRACTOR shall provide evidence of recent and accurate calibration of all chart-recording instruments. The date and time of the commencement and completion of the pressure test shall be recorded on the pressure chart, which shall be signed by the CONTRACTOR's superintendent and the ENGINEER. The original test chart shall be submitted along with a Test Record form and submitted to the ENGINEER for verification.

The GUC reserves the right to utilize its own test recording apparatuses, on any job at the discretion of the ENGINEER.

All gas mains installed within the distribution system shall be tested at ninety (90) psig or as directed by the ENGINEER for the minimum duration specified in Table 5.4.2.

**TABLE 5.4.2
PRESSURE TEST DURATIONS**

PIPE LENGTH (FEET)	DURATION OF TEST MAINS
0 – 250	15 Minutes
Over 250 – 500	30 Minutes
Over 500 – 1000	1 Hour
> 1,000	8 Hours

Any variations in the test durations specified in Table 5.4.2 shall be subject to the approval of the ENGINEER.

The hourly pressure along with the ambient temperature at the beginning and end of the test shall be recorded for the duration of the test on the GUC's standard form. The date and time of the commencement and completion of the pressure test shall be recorded on the form, which shall be signed by the CONTRACTOR's inspector and submitted to the ENGINEER for verification.

After correcting for temperature changes, the test shall show no loss of pressure over the duration of the test.

All tie-in fuses and fittings not included in the pressure test shall be leak tested with a foaming leak locating compound solution after the main line has been placed into service.

Any and all breaks, leaks or defects in the pipe, valves and fittings discovered during the pressure and/or foaming leak locating compound tests shall be located, repaired or replaced, and re-tested by the CONTRACTOR, at the CONTRACTOR's expense, as directed by the ENGINEER.

5.5 Purging

Upon the successful completion of the pressure and/or foaming leak locating compound test, and after the gas main or each section thereof has been cleaned and approved in every respect to the satisfaction of the ENGINEER, the GUC will be notified and, under their supervision, natural gas will be admitted into the completed mains in sufficient quantities such that all air is purged out of the line(s). A 75 lb gas cylinder of nitrogen shall be injected into the pipeline to provide a separating media between the air and natural gas.

All purging operations will be done under the direct supervision of the ENGINEER. The CONTRACTOR shall provide a minimum of twenty-four (24) hours notice to the ENGINEER prior to commencing any purging operations.

Under no circumstances shall the CONTRACTOR operate any existing valves within the GUC distribution system.

When a reading of 100-percent gas is measured using an approved, calibrated CGI, all purge valves shall be closed and gas pressure continuously maintained on the line(s). The CGI shall be provided by the CONTRACTOR and operated by qualified personnel.

The GUC will provide all of the natural gas necessary for the initial purging operations. Any natural gas required for subsequent purging operations, if so required shall be provided at the CONTRACTOR's expense.

Measurement and Payment

Purging operations are considered incidental work and will not be measured for payment. The cost of any and all equipment, material and labor required for purging operations shall be included in the unit prices bid for the various pay items of the work.

5.6 Tie-Ins to Existing System

It is the responsibility of the CONTRACTOR to connect the work to existing or previously installed facilities as shown on the Plans or as directed by the ENGINEER.

The Plans describe generalized tie-in procedures and materials. The CONTRACTOR shall be aware that additional fittings or alignment changes may be necessary to properly and efficiently complete the tie-in operations. The CONTRACTOR, at no cost to the GUC, shall furnish the necessary incidental materials and install the necessary materials required to complete the tie-in as shown on the Plans or as directed by the ENGINEER.

The CONTRACTOR shall have available the appropriate drilling, tapping and stopping equipment necessary for the various fittings shown on the Plans and trained and experienced personnel to operate this equipment. The tie-in operations shall be performed in a sequence as directed by the ENGINEER.

The CONTRACTOR shall have available the appropriate squeeze-off tools for plastic pipe. All points on the plastic pipe where the squeeze-off is applied shall have a full encirclement clamp or an electrofusion coupling installed to mark the location and to reinforce the pipe.

All tie-in operations, including but not limited to installation of the tie-in fitting and main blow-downs shall be performed under the direct supervision of the ENGINEER. The

CONTRACTOR shall provide the ENGINEER with at least forty-eight (48) hours advance notice prior to initiating tie-in procedures.

The CONTRACTOR shall not commence any tie-in operations until the new mains have been cleaned and tested as specified in 5.4 Pressure and Leak Testing.

Under no circumstances shall the CONTRACTOR operate any valves within the existing gas distribution system, or otherwise interrupt or restore gas service to any customer. GUC personnel shall perform all valve operations and service restorations, as required.

Measurement and Payment

Squeeze off, fused, and coupled tie-in operations will be measured for payment based upon the number installed. The unit bid price shall include the cost of any and all equipment, incidental material and labor required for these tie-in operations.

6 SECTION 6 - EROSION CONTROL

6.1 RELATED DOCUMENTS

- 6.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.
- 6.1.2 The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
1. U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
 - a. 33 CFR 32
 - 1) Definitions
 - b. 40 CFR 261
 - 1) Identification and Listing of Hazardous Waste
 - c. 49 CFR 171 – 178
 - 1) Hazardous Materials Regulations
 2. U.S. ARMY CORPS OF ENGINEERS (USACE)
 - a. WETLAND MANUAL
 - 1) Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

6.2 DEFINITIONS

6.2.1 Environmental Pollution and Damage:

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

6.2.2 Environmental Protection:

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

6.2.3 CONTRACTOR Generated Hazardous Waste:

CONTRACTOR generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the CONTRACTOR to execute WORK, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

6.2.4 Land Application for Discharge Water:

The term "Land Application" for discharge water implies that the CONTRACTOR shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

6.2.5 Surface Discharge:

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

6.2.6 Waters of the United States:

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

6.2.7 Wetlands:

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

6.3 LAND RESOURCES

6.3.1 The CONTRACTOR shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the CONTRACTOR shall identify any land resources to be preserved within the WORK area. Except in areas indicated on the drawings or specified to be cleared, the CONTRACTOR shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The CONTRACTOR shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the CONTRACTOR.

6.3.2 WORK Area Limits

1. Prior to commencing construction activities, the CONTRACTOR shall mark the areas that need not be disturbed under this contract. Isolated areas within the general WORK area which are not to be disturbed shall be marked. Monuments and markers shall be protected before construction operations commence. The CONTRACTOR's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

6.3.3 Landscape

1. Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The CONTRACTOR shall

restore landscape features damaged or destroyed during construction operations outside the limits of the approved WORK area.

6.3.4 Erosion and Sediment Controls

1. The CONTRACTOR shall be responsible for providing erosion and sediment control measures in accordance with the specifications and plans and all Federal, State, and local laws and regulations. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The CONTRACTOR shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs) as indicated on the drawings. BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Any temporary measures shall be removed after the area has been stabilized.

6.3.5 CONTRACTOR Facilities and WORK Areas

1. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or WORK areas shall be controlled to protect adjacent areas.

6.3.6 Water Resources

1. The CONTRACTOR shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the CONTRACTOR.

6.3.7 Stream Crossings

1. Stream crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments. Construction of stream crossing structures shall be in compliance with Clean Water Act Section 404, Nation Wide Permit No. 12, and Section 10 of Rivers and Harbors Act.

6.3.8 Wetlands

1. The CONTRACTOR shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands. The CONTRACTOR shall be responsible for the protection of the wetlands shown on the drawings in accordance with all ENVIRONMENTAL PERMITS AND APPROVALS.

6.4 BURNING

- 6.4.1 Burning shall not be allowed on the project site.

6.5 SOLID WASTES

- 6.5.1 Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent

contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. Waste materials shall be disposed of in a timely manner at an authorized disposal facility.

6.5.2 CONTRACTOR GENERATED HAZARDOUS WASTES/EXCESS HAZARDOUS MATERIALS

1. Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The CONTRACTOR shall, at a minimum, manage and store hazardous waste in accordance with all Federal, State and local laws and regulations. The CONTRACTOR shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The CONTRACTOR shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The CONTRACTOR shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The CONTRACTOR shall transport CONTRACTOR generated hazardous waste in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The CONTRACTOR shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the ENGINEER and the Owner. Cleanup and cleanup costs due to spills shall be the CONTRACTOR's responsibility. The disposition of CONTRACTOR generated hazardous waste and excess hazardous materials are the CONTRACTOR's responsibility.

6.5.3 FUEL AND LUBRICANTS

1. Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with State, and local laws and regulations. There shall be no storage of fuel on the project site. Fuel must be brought to the project site each day that WORK is performed.

6.5.4 WASTE WATER

1. Disposal of waste water shall be as specified below.
 - a. Waste water from construction activities, such as on site material processing, clean-up, test water, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The CONTRACTOR shall dispose of the construction related waste water in accordance with all CITY OF WILSON regulations.
 - b. Water generated from the flushing of lines after hydrostatic testing shall be land applied in accordance with all Federal, State, and Local laws and regulations for land application. The CONTRACTOR shall discharge the water at a slow enough rate that allows it to permeate in to the soil.

6.5.5 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

1. Existing historical, archaeological, and cultural resources within the CONTRACTOR's WORK area will be shown on the construction drawings. The CONTRACTOR shall protect these resources and shall be responsible for their preservation during the life of the Contract. If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the CONTRACTOR shall immediately notify ENGINEER so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The CONTRACTOR shall cease all activities that may result in impact to or the destruction of these resources. The CONTRACTOR shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

6.5.6 BIOLOGICAL RESOURCES

1. The CONTRACTOR shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The CONTRACTOR shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

6.5.7 POST CONSTRUCTION CLEANUP

1. The CONTRACTOR shall clean up all areas used for construction. The CONTRACTOR shall, unless otherwise instructed in writing by ENGINEER, obliterate all signs of temporary construction facilities such as haul roads, WORK area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the WORK. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

Erosion and Sediment Control

- 6.6 The CONTRACTOR shall implement the erosion and sediment control and prevention measures specified in the PLANS and this section in a manner which will meet the requirements of ENVIRONMENTAL PROTECTION, and the requirements of the North Carolina Department of Environment and Natural Resources (NCDENR) permit.

- 6.7 The following shall be submitted in accordance with SUBMITTAL PROCEDURES:

6.7.1 SD-01 Preconstruction Submittals:

1. Erosion and Sediment Control Inspection Report

6.7.2 SD-07 Certificates

1. Certificate or Affidavit

6.8 EROSION AND SEDIMENT CONTROLS

6.8.1 The CONTRACTOR shall install and maintain the erosion and sediment controls as indicated in the PLANS and these SPECIFICATIONS. The CONTRACTOR shall install all permanent erosion and sediment control measures such as seeding, mulching and tacking within 15 working days or 30 calendar days (whichever is shorter) following restoration of trenchline and workspace. Other measures such as silt fences, sediment traps, temporary diverters and other temporary measures shall be installed simultaneously with the land disturbing activity. Some measures will be required to be installed prior to land disturbing activities and are defined in the Plans. The CONTRACTOR is responsible for maintaining all erosion and sediment control measures during construction until ENGINEER and the OWNER releases the CONTRACTOR from this phase of the project. The OWNER will then assume the responsibility of maintaining permanent measures and removing temporary measures such as silt fences. The controls and measures required by the CONTRACTOR are described below.

6.8.2 Stabilization Practices

1. The stabilization practices to be implemented shall include temporary seeding, mulching, protection of trees, preservation of mature vegetation, etc.

6.8.3 Structural Practices

1. Structural practices shall be implemented to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices shall be implemented in a timely manner during the construction process to minimize erosion and sediment runoff. Structural practices including the location and details of installation and construction are shown on the Project Plans.

6.8.4 Silt Fences

1. The CONTRACTOR shall provide silt fences as a temporary structural practice to minimize erosion and sediment runoff. Silt fences shall be properly installed to effectively retain sediment immediately after completing each phase of WORK where erosion would occur in the form of sheet and rill erosion (e.g. clearing and grubbing, excavation, embankment, and grading). Silt fences shall be installed in the locations indicated on the drawings. Final removal of silt fence barriers shall be upon approval by ENGINEER.

6.9 MATERIALS FOR SILT FENCES

6.9.1 The CONTRACTOR shall use material as indicated in the project plans.

1. Certificate or Affidavit
 - a. A certificate or affidavit shall be provided attesting that the fabric and factory seams meet chemical, physical, and manufacturing requirements specified in the Project Plans. The CONTRACTOR shall submit a certificate or affidavit signed by a legally authorized official from the company manufacturing the filter fabric.
2. Silt fences and erosion and sedimentation control materials shall be supplied by the CONTRACTOR.

6.10 INSTALLATION OF SILT FENCES

6.10.1 Silt fences shall be installed as shown on the Project Plans. Silt fences shall be removed upon approval by ENGINEER.

6.11 MAINTENANCE

6.11.1 The CONTRACTOR shall maintain the temporary and permanent vegetation, erosion and sediment control measures, and other protective measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness, by restoration of destroyed vegetative cover, and by repair of erosion and sediment control measures and other protective measures. The following procedures shall be followed to maintain the protective measures.

1. Silt Fence Maintenance

- a. Silt fences shall be inspected in accordance with paragraph 3.3, INSPECTIONS. Any required repairs shall be made promptly. Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting. Should the fabric on a silt fence decompose or become ineffective, and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits shall be removed when deposits reach one-third of the height of the barrier. When a silt fence is no longer required, it shall be removed. The immediate area occupied by the fence and any sediment deposits shall be shaped to an acceptable grade. The areas disturbed by this shaping shall be seeded in accordance with the Specifications and Project Plans.

6.12 INSPECTIONS

6.12.1 General

1. The CONTRACTOR shall inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, stabilization practices, structural practices, other controls, and area where vehicles exit the site at least once every seven (7) calendar days and within 24 hours of the end of any storm that produces 0.5 inches or more rainfall at the site. Sites with final stabilization shall be inspected at least once every month.

6.12.2 Inspections Details

1. Disturbed areas and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the Storm Water Pollution Prevention Plan shall be observed to ensure that they are operating correctly. Discharge locations or points shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles exit the site shall be inspected for evidence of offsite sediment tracking.

6.12.3 Erosion and Sediment Control Inspection Reports

1. For each erosion and sediment control inspection conducted, the CONTRACTOR shall prepare a Erosion and Sediment Control Inspection Report summarizing the scope of the

inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan, maintenance performed, and actions taken. The report shall be furnished to ENGINEER within 24 hours of the inspection. A copy of the inspection report shall be maintained on the job site.

Construction Waste Management and Disposal

6.13 RELATED DOCUMENTS

6.13.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

6.14 SUMMARY

6.14.1 Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous construction waste.
2. Recycling nonhazardous construction waste.
3. Disposing of nonhazardous construction waste.

6.15 DEFINITIONS

6.15.1 Construction Waste: Building and site improvement materials and other solid waste resulting from construction or repair operations. Construction waste includes packaging.

6.15.2 Disposal: Removal off-site of construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

6.15.3 Recycle: Recovery of construction waste for subsequent processing in preparation for reuse.

6.15.4 Salvage: Recovery of construction waste and subsequent sale or reuse in another facility.

6.15.5 Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

6.16 A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction waste from landfills and incinerators. Facilitate recycling and salvage of materials.

6.17 QUALITY ASSURANCE

6.17.1 CONTRACTOR shall appoint a person to ensure that construction waste is handled according to CONTRACTOR's waste management plan.

6.18 WASTE MANAGEMENT PLAN

6.18.1 General: Develop a waste management plan identifying the type of waste that will be encountered during construction and how that waste will be handled. It may be handled by disposal, recycling, salvage, and/or salvage for reuse.

6.19 PLAN IMPLEMENTATION

6.19.1 General: Implement waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

6.20 DISPOSAL OF WASTE

6.20.1 General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

6.20.2 Burning: Burning of waste materials is not permitted on the project site.

6.20.3 Disposal: Remove waste debris from clearing and grubbing and dispose of off-site at areas approved for vegetation waste.

Row Restoration

6.21 CONTRACTOR is responsible for restoring the surface to pre-construction contours and restoring vegetation according to the seeding and sodding requirements included in the project plans.

6.22 Restoration shall occur in sections that are complete within fourteen (14) days following the restoration of the surface to original contours, removal of construction equipment and debris, and cessation of work in that section of the easement and work space.

6.22.1 Restoration may not be delayed until after all construction has been completed.

6.22.2 As the remaining construction progresses, the CONTRACTOR shall revisit and inspect previously restored sections of the ROW and install remedial restoration measures as necessary.

6.23 EROSION AND SEDIMENT CONTROLS

6.23.1 The CONTRACTOR shall install and maintain the erosion and sediment controls as indicated in the PLANS and these SPECIFICATIONS. The CONTRACTOR shall install all permanent erosion and sediment control measures such as seeding, mulching and tacking within 14 days following restoration of surface contours, removal of construction equipment and debris, and cessation of work in that section of the easement and work space.

6.23.2 The CONTRACTOR is responsible for maintaining all erosion and sediment control measures during construction until ENGINEER and the OWNER releases the CONTRACTOR from this phase of the project. The OWNER will then assume the responsibility of maintaining permanent measures and removing temporary measures such as silt fences. The controls and measures required by the CONTRACTOR are described below.

6.24 SEED AND SOD

6.24.1 The specifications for soil preparation, fertilizing, seeding, mulching, and tacking are included in TURF AND GRASSES.

6.25 RESTORATION

6.25.1 The ROW surface shall be returned to pre-construction contours as soon as the trench line is restored, debris is removed, matting and equipment are removed, and the ROW is no longer required as a construction road to access portions of the ROW with construction in projects or planned.

6.25.2 Seeding and sodding shall occur within fourteen (14) days following restoration.

6.26 MAINTENANCE

6.26.1 The CONTRACTOR shall revisit restored portions of the ROW as the Project continues and apply remedial measures to the section of ROW previously restored in order to obtain the cover necessary to prevent erosion to occur.

6.27 INSPECTIONS

6.27.1 General

1. The CONTRACTOR shall inspect restored areas of the construction site at least once every fourteen (14) calendar days and within 24 hours of the end of any storm that produces 0.5 inches or more rainfall at the site.
2. The CONTRACTOR's is released from their responsibilities for site restoration after Final Acceptance of the WORK by the OWNER.

Turf and Grasses

6.28 TURF AND GRASSES

RELATED DOCUMENTS:

The general provisions of the Contract, including the General and Special Conditions and Specification sections apply to work of this section.

DESCRIPTION OF WORK:

Permanent Seeding: Permanent seeding is required for all areas disturbed by construction, except for areas covered by structures, pavements, etc.

Temporary Seeding: Temporary seeding of disturbed areas shall be performed whenever one or more of the following conditions exist:

The Engineer determines temporary seeding is necessary to prevent or stop erosion of disturbed areas.

Work is suspended or delayed on any portion of the project for 30 days and the potential for erosion exists.

Whenever permanent seeding is delayed beyond that required by the Contract Documents.

QUALITY ASSURANCE:

Codes and Standards: In general, follow procedures and guides published by the Soil Conservation Service, United States Department of Agriculture.

PART 2 - PRODUCTS

FERTILIZER:

Provide commercial fertilizer conforming to statutory requirements and all rules and regulations adopted by the North Carolina Board of Agriculture.

LIMESTONE:

Provide agricultural limestone conforming to all statutory requirements and all rules and regulations adopted by the North Carolina Board of Agriculture.

SEED:

Provide seed conforming to all statutory requirements and all rules and regulations adopted by the North Carolina Board of Agriculture.

Provide seed in accordance with requirements shown below. Deliver to site in original containers, labeled to show that the requirements of the N.C. Seed Law are met.

Quality of seed shall conform to the following:

<u>Common Name</u>	<u>Minimum Seed Purity</u> %	<u>Minimum Germination</u> %	<u>Maximum Weed Seed</u> %
<u>Grasses</u>			
Fescue Tall (KY.-31)	98	90	1.00
Common Bermudagrass	99	90	0.1
Centipede	80	90	1.00
Rye	80	90	1.00

Seeding containing prohibited noxious weed seed shall not be accepted. Seed shall be in conformance with state seed law restrictions for restricted noxious weeds.

If seed of the accepted quality cannot be bought, secure prior approval before making changes or exceptions.

MULCH:

Mulch for erosion control shall consist of grain straw or other acceptable material, and shall have been approved by the Engineer before being used. All mulch shall be reasonably free from mature seedbearing stalks, roots, or bulbets of Johnson Grass, Nutgrass, Sandbur, Wild Garlic, Wild Onion, Bermuda Grass, Crotalaria, and Witchweed, and free of excessive amount of restricted noxious weeds as defined by the North Carolina Board of Agriculture at the time of use of the mulch. Also there shall be compliance with all applicable State and Federal domestic plant quarantines. Straw mulch that is matted or lumpy shall be loosened and separated before being used.

Material for holding mulch in place shall be asphalt or other approved binding material applied in accordance with this section.

JUTE MESH:

Use jute mesh on seeded areas where slope is steeper than 2 horizontal to one vertical (2:1 slope). Use woven jute yarn weighing approximately 90 lbs. per 100 sq. yds. and having 3/4" openings.

PART 3 - EXECUTION

GENERAL:

Follow procedures set forth in the publication "Guide for Sediment Control on Construction Sites in North Carolina" by the United States Department of Agriculture, Soil Conservation Service, and as specified herein.

Scarify soil to a depth of three (3) inches and work into a satisfactory seed bed by discing, use of cultipackers, harrows, drags and other approved means.

Preparation outlined above shall not be done when the soil is frozen, wet or otherwise in an unfavorable condition.

Begin and complete seeding operations as outlined below as soon as possible after final grading is completed, but in no event later than 30 days after completion of final grading.

Distribute lime and fertilizer, uniformly over seed bed and harrow, rake, or otherwise work same into seed bed.

Distribute seed uniformly over seed bed. Cover seed lightly after seeding.

No lime, fertilizer, or seed shall be applied during a strong wind, when soil is wet or otherwise unworkable. Should rain follow seeding before rolling is begun, the bed shall not be rolled.

SODDING PROCEDURES

Moistening the Soil: During periods of higher than optimal temperature for species being specified and after all unevenness in the soil surface has been corrected, the soil shall be lightly moistened immediately prior to laying the sod.

Starter Strip: The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. Sod shall be cut as required to fit irregular areas. Wheeling sod over prepared sod will not be permitted except over boards or mats.

Sloping Surfaces: On slope areas lay sod with long edge parallel to contour; start at bottom of slope, and peg in place on slopes of 3=1 or greater with at least one peg per square yard.

Watering and Rolling: Contractor shall water sod immediately after transplanting to prevent excessive drying during progress of the work. As sodding is completed in any one section, the entire area shall be rolled. It shall then be thoroughly watered to a depth sufficient that the underside of the new sod pad and soil immediately below the sod are thoroughly wet. The General Contractor shall be responsible for having adequate water available at the site prior to and during transplanting the sod.

Timing: Sod may be installed only between October 01 and April 30. Any installation outside these dates shall be approved by the Project Consultant.

SOD MAINTENANCE

Watering: The Contractor shall provide water daily for the sod as required for a period not less than thirty (30) days after it is laid. Watering shall be applied in a manner that will prevent erosion. Watering equipment shall be of a type that will prevent damage to the finished surface.

First Week: The Contractor shall provide all labor and arrange for all watering necessary for rooting of the sod. Soil on sod pads shall be kept moist at all time. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of at least 4 inches. Watering should be done during the heat of the day to prevent wilting.

Second and Subsequent Weeks: The Contractor shall water the sod as required to maintain adequate moisture, in the upper 4 inches of soil, necessary for the promotion of deep root growth.

Mowing: The Contractor shall be responsible for the first two mowings, and any other mowing necessary until final inspection. Mowing shall be required when the sod is over 2" tall and shall be mowed to a height of 1½- 2 inches.

The first mowing shall not be attempted until the sod is firmly rooted and secure in place. Not more than 40% of the grass leaf shall be removed by the initial or subsequent mowings.

Any accumulation of clippings shall be removed within 12 hours after mowing.

Corrective Measures

Reworking and resodding of any areas which fail to show evidence of rooting shall be done at Contractor's expense with the same type sod.

It is the Contractor's responsibility to carry out the above operations on a continuing basis until the lawn areas are accepted by the Project Consultant.

In the event the required maintenance period extends beyond 30 days, the Contractor will be responsible for fertilizing, weeding, and other pest control, if required, in addition to watering and mowing.

PERMANENT SEEDING:

Application of Lime, Fertilizer and Seed:

Apply lime at the rate of 2 tons per acre.

Apply fertilizer at a rate of 500 pounds per acre or at a rate at which will provide the following amounts of nutrients:

Nitrogen:	100 pounds per acre
Potash:	100 pounds per acre
Phosphorous:	100 pounds per acre

Apply 600 pounds per acre of 20% superphosphate or equivalent in addition to that listed above or use an analysis which will provide the additional phosphorous.

Provide permanent seeding in accordance with the following schedule:

Tall Fescue	75 pounds per acre
Centipede	5 pounds per acre
Bermuda Grass	50 pounds per acre

Waste and Borrow Locations:

Tall Fescue	50 pounds per acre
Pensacola Bahiagrass	75 pounds per acre
Fertilizer	500 pounds per acre

Lime 2 tons per acre

TEMPORARY SEEDING:

Seed in accordance with Soil Conservation Service recommendations with regard to seed type, rate of application, fertilizer, etc.

APPLICATION OF MULCH:

Apply mulch immediately after permanent seeding at a uniform rate sufficient to achieve approximately 80% coverage of ground surface. Care must be taken to prevent the mulch from being applied too thickly and smothering the seedlings. Mulch for temporary seeding should be applied based upon the recommendations of the Soil Conservation Service for the particular type of seed to be used.

Mulch Anchoring:

On ground slopes less than 4%, anchor mulch with a straight blade disk or anchoring tool. Press mulch into soil about three inches. Operate equipment across slopes.

On ground slopes greater than 4%, apply asphalt with suitable applicator at a rate of not less than 150 gallons per ton of mulch.

Peg and twine anchoring may be used on steep slopes. Drive 8" wood stakes every 3 to 4 feet in all directions. Stretch in a crisscross and square in all directions. Secure twine around pegs and drive pegs flush with surface.

REPAIR AND MAINTENANCE:

Maintain the grass on the area for a period of 90 days after the grass growth appears. Reseed bare areas and repair all eroded areas during that period.

Repairs: Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer and seeding recommendations.

All areas which do not exhibit satisfactory ground cover within 45 days of seed application shall be replanted.

RELATED DOCUMENTS:

The general provisions of the Contract, including the General and Special Conditions and Specification sections apply to work of this section.

DESCRIPTION OF WORK:

Permanent Seeding: Permanent seeding is required for all areas disturbed by construction, except for areas covered by structures, pavements, etc.

Temporary Seeding: Temporary seeding of disturbed areas shall be performed whenever one or more of the following conditions exist:

The Engineer determines temporary seeding is necessary to prevent or stop erosion of disturbed areas.

Work is suspended or delayed on any portion of the project for 30 days and the potential for erosion exists.

Whenever permanent seeding is delayed beyond that required by the Contract Documents.

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Material for holding mulch in place shall be asphalt or other approved binding material applied in accordance with this section.

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Use jute mesh on seeded areas where slope is steeper than 2 horizontal to one vertical (2:1 slope). Use woven jute yarn weighing approximately 90 lbs. per 100 sq. yds. and having 3/4" openings.

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Waste and Borrow Locations:

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Pensacola Bahiagrass	75 pounds per acre
Fertilizer	500 pounds per acre
Lime	2 tons per acre

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APPLICATION OF MULCH:

Apply mulch immediately after permanent seeding at a uniform rate sufficient to achieve approximately 80% coverage of ground surface. Care must be taken to prevent the mulch from being applied too thickly and smothering the seedlings. Mulch for temporary seeding should be applied based upon the recommendations of the Soil Conservation Service for the particular type of seed to be used.

Mulch Anchoring:

On ground slopes less than 4%, anchor mulch with a straight blade disk or anchoring tool. Press mulch into soil about three inches. Operate equipment across slopes.

On ground slopes greater than 4%, apply asphalt with suitable applicator at a rate of not less than 150 gallons per ton of mulch.

Peg and twine anchoring may be used on steep slopes. Drive 8" wood stakes every 3 to 4 feet in all directions. Stretch in a crisscross and square in all directions. Secure twine around pegs and drive pegs flush with surface.

REPAIR AND MAINTENANCE:

Maintain the grass on the area for a period of 90 days after the grass growth appears. Reseed bare areas and repair all eroded areas during that period.

Repairs: Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer and seeding recommendations.

All areas which do not exhibit satisfactory ground cover within 45 days of seed application shall be replanted.

End of Section 6



Geotechnical Engineering Data Report

**VOA Site C Road Gas Line Improvements
Greenville, Pitt County, North Carolina**

December 13, 2021

Terracon Project No. 72215131

Prepared for:

Greenville Utilities Commission
Greenville, North Carolina

Prepared by:

Terracon Consultants, Inc.
Winterville, North Carolina



December 13, 2021

Greenville Utilities Commission
PO Box 1847
Greenville, North Carolina 27835

Attn: Mr. Durk Tyson
P: (252) 551-2048
E: tysonfd@guc.com

Re: Geotechnical Engineering Data Report
VOA Site C Road Gas Line Improvements
VOA Site C Road
Greenville, Pitt County, North Carolina
Terracon Project No. 72215131

Dear Mr. Tyson:

We have completed Geotechnical Engineering Data services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. P72215131 dated October 21, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning existing soil conditions for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Branson Rogers
Geotechnical Professional

Andrew J. Gliniak, PE
Geotechnical Project Engineer
Registered NC 042183

Andrew A. Nash, PE
Department Manager (Raleigh, NC)

REPORT TOPICS

INTRODUCTION.....	1
SITE CONDITIONS.....	1
PROJECT DESCRIPTION.....	2
GEOTECHNICAL CHARACTERIZATION.....	2
GEOTECHNICAL OVERVIEW.....	3
GENERAL COMMENTS.....	4
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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
PHOTOGRAPHY LOG
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Data Report

VOA Site C Road Gas Line Improvements

VOA Site C Road

Greenville, Pitt County, North Carolina

Terracon Project No. 72215131
December 13, 2021

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed gas line to be located at VOA Site C Road in Greenville, Pitt County, North Carolina. The purpose of these services is to provide geotechnical information relative to:

- Subsurface soil conditions
- Groundwater conditions

The geotechnical engineering Scope of Services for this project included the advancement of three test borings to depths approximately 20 feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located along VOA Site C Road in Greenville, Pitt County, North Carolina. See Site Location and Exploration Plan
Site Coordinates	B-1: N 35.6101°, W 77.5013° B-2: N 35.6117°, W 77.5019° B-4: N 35.6444°, W 77.4753° (approximate, see Exhibit D)
Existing Improvements	Existing roadway. There were multiple utilities that were in the vicinity of each exploration location.
Current Ground Cover	Asphalt roadway and grassy shoulders

Item	Description
Existing Topography	B-1: Slightly sloping towards Pinelog Branch with elevations ranging from 61 feet to 59 feet. Shoulder slopes west into a relatively flat ditch. B-2: Relatively level at 62 feet. The shoulder ran adjacent to a steep ditch. B-4: Relatively level at 69.5 feet. Shoulders slope away from the road.
Geology	The subject site is located in the Coastal Plain Physiographic Province. The Coastal Plain soils consist mainly of marine sediments that were deposited during successive periods of fluctuating sea level and moving shoreline. The soils include sands, silts, and clays with irregular deposits of shells, which are typical of those lain down in a shallow sloping sea bottom. Recent alluvial sands, silts, and clays are typically present near rivers and creeks. According to USGS Mineral Resources On-Line Spatial Data based on the 1998 digital equivalent of the 1985 Geologic Map of North Carolina updated in 1998, the site is mapped within Surficial Deposits, Undivided (Quaternary).

We also collected photographs at the time of our field exploration program. Representative photos are provided in our [Photography Log](#).

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	Email communication on October 13, 2021 with a follow-up telephone conversation on October 19, 2021. We were provided with a site plan detailing proposed boring locations.
Project Description	A natural gas line extension along VOA Site C Road. Terracon is being asked to provide borings at some of the deeper horizontal directional drilling (HDD) locations in order to provide soil information to the contractors.
Estimated Start of Construction	Spring 2022

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical evaluation of site. Conditions encountered at each exploration point are indicated on the individual

logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Topsoil	Grass/Topsoil/Rootmat
2	Softer/looser soil	Very loose sand and very soft to soft clay
3	Sandy soil	Loose to dense sand

Groundwater

Groundwater was measured and estimated at depths of 3 feet to 6 feet below the existing surface based on the moisture condition of the soil samples. For a more accurate levels of groundwater, long term readings could be obtained by installing piezometers and taking weekly readings.

Test Location	Approximate Depth to Groundwater (feet) ¹	Estimated Elevation of Observed Groundwater (feet) ²
B-1	5	55
B-2	6	56
B-4	3	66.5

1. Below existing ground surface.

2. Elevations estimated from the provided topographic survey and GoogleEarth Pro.

Groundwater was initially encountered at 1 ft at location B-1. The test location was located in a ditch and the water initially encountered was likely perched.

The groundwater level can change due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

GEOTECHNICAL OVERVIEW

The subsurface exploration at locations B-1 and B-2 encountered very loose sand in the upper 5 feet underlain by denser sand to 8 feet, underlain by looser/softer soils to 20 feet. Boring B-4 encountered very loose sand/softer soil in the upper 5 feet underlain by loose to dense sand.

Boring B-4 was offset to the opposite side of the road due to the steep ditches and little room for the drilling crew to work.

The **General Comments** section provides an understanding of the report limitations.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

FIGURES

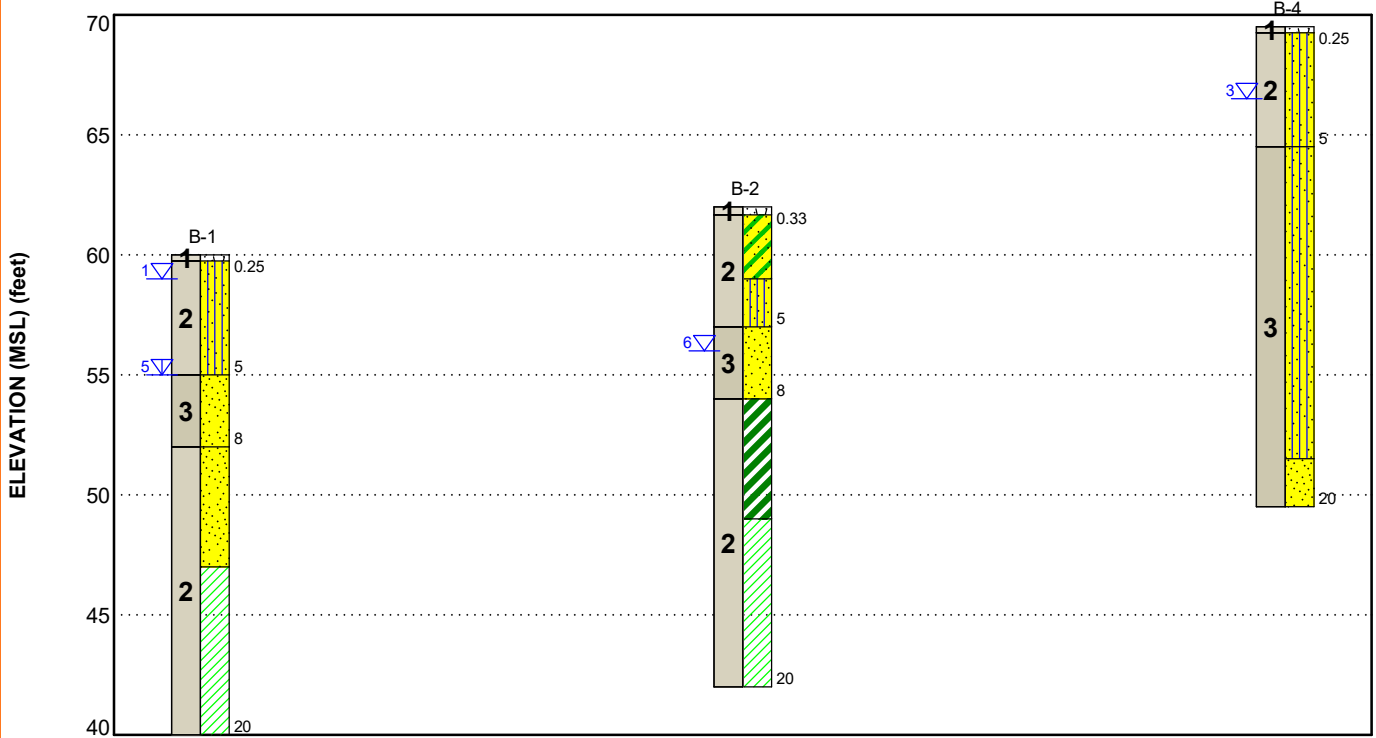
Contents:

GeoModel

Note: All attachments are one page unless noted above.

GEOMODEL

VOA Site C Road Gas Improvements ■ Greenville, NC
Terracon Project No. 72215131



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Topsoil	Grass/Topsoil/Rootmat
2	Softer/looser soil	Very loose sand and very soft to soft clay
3	Sandy soil	Loose to dense sand

LEGEND

- Topsoil
- Lean Clay
- Silty Sand
- Clayey Sand
- Poorly-graded Sand
- Fat Clay

- First Water Observation
- Second Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet)	Location
Three	20	Along the shoulder of existing roadway

Exploration location B-3 was unable to be completed due to many utility conflicts that were in the vicinity of the boring.

Exploration Location Layout and Elevations: Coordinates of the exploration locations were determined by overlaying the plans provided on aerial photography by referencing common features. The exploration locations were located in the field by Terracon by referencing existing site features and a handheld GPS. Approximate elevations were obtained from the provided topographic survey and GoogleEarth Pro. The location and elevations of the exploration locations should be considered accurate only to the degree implied by the means and methods used to define it.

Subsurface Exploration Procedures: We advanced the borings with a track-mounted rotary drill rig using continuous flight hollow stem augers. Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural

Geotechnical Engineering Data Report

VOA Site C Road Gas Line Improvements ■ Greenville, Pitt County, North Carolina
December 13, 2021 ■ Terracon Project No. 72215131



standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Method of Determination of Water Content of Soil and Rock by Mass
- ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D2488 Standard Practice of Description and Identification of Soils (Visual Manual Method)
- ASTM D422 Standard Test Method for Particle Size Analysis of Soils
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than No. 200 Sieve in Soils by Washing
- ASTM D4318 Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Geotechnical Engineering Data Report

VOA Site C Road Gas Line Improvements ■ Greenville, Pitt County, North Carolina
December 13, 2021 ■ Terracon Project No. 72215131



PHOTOGRAPHY LOG

Photos taken November 9th, 2021



Boring B-1 facing north (B-1 was slightly offset southwest (further into the ditch) to avoid existing utilities, since this photo was taken)



Boring B-2

Geotechnical Engineering Data Report

VOA Site C Road Gas Line Improvements ■ Greenville, Pitt County, North Carolina
December 13, 2021 ■ Terracon Project No. 72215131



Boring B-4

SITE LOCATION AND EXPLORATION PLANS

Contents:

Site Location Plan (two pages)

Exploration Plan (two pages)

Note: All attachments are one page unless noted above.

SITE LOCATION

VOA Site C Road Gas Improvements ■ Greenville, NC
December 13, 2021 ■ Terracon Project No. 72215131

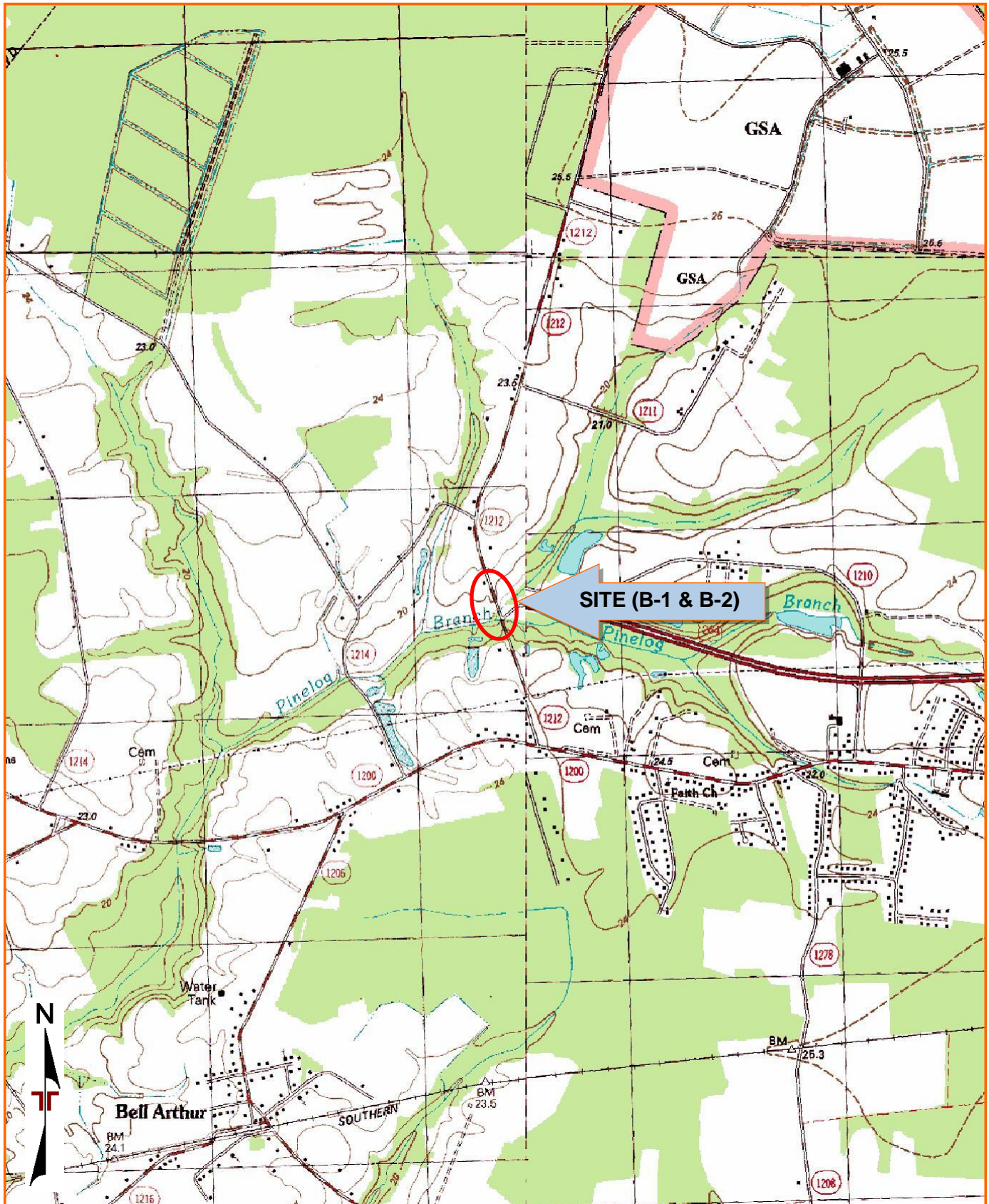


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: FALKLAND, NC (1/1/1997), GREENVILLE NW, NC (1/1/1998), FARMVILLE, NC (1/1/1981) and GREENVILLE SW, NC (1/1/1998).

EXPLORATION PLAN

VOA Site C Road Gas Improvements ■ Greenville, NC
December 13, 2021 ■ Terracon Project No. 72215131



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

SITE LOCATION

VOA Site C Road Gas Improvements ■ Greenville, NC
December 13, 2021 ■ Terracon Project No. 72215131

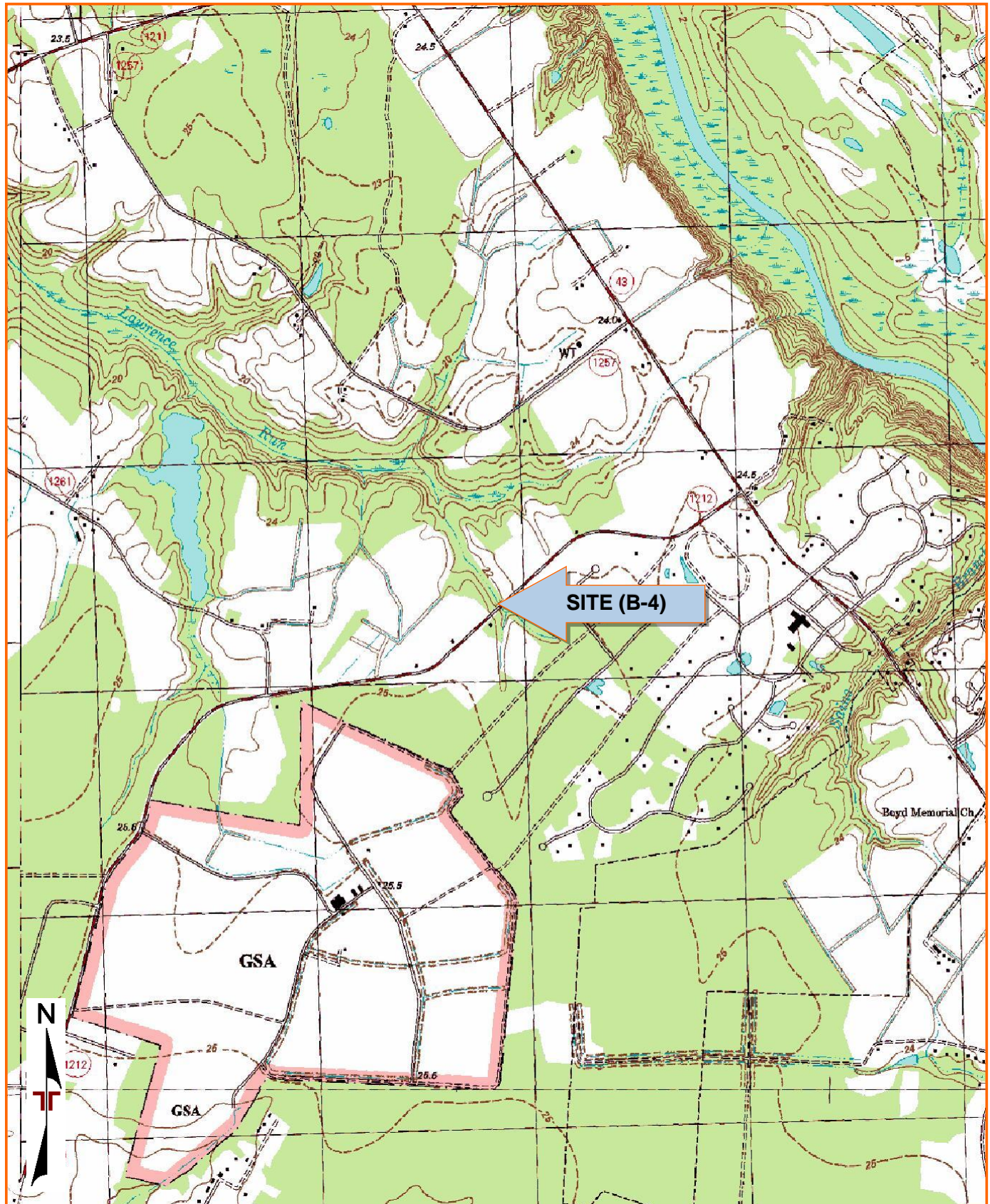


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

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EXPLORATION PLAN

VOA Site C Road Gas Improvements ■ Greenville, NC
December 13, 2021 ■ Terracon Project No. 72215131

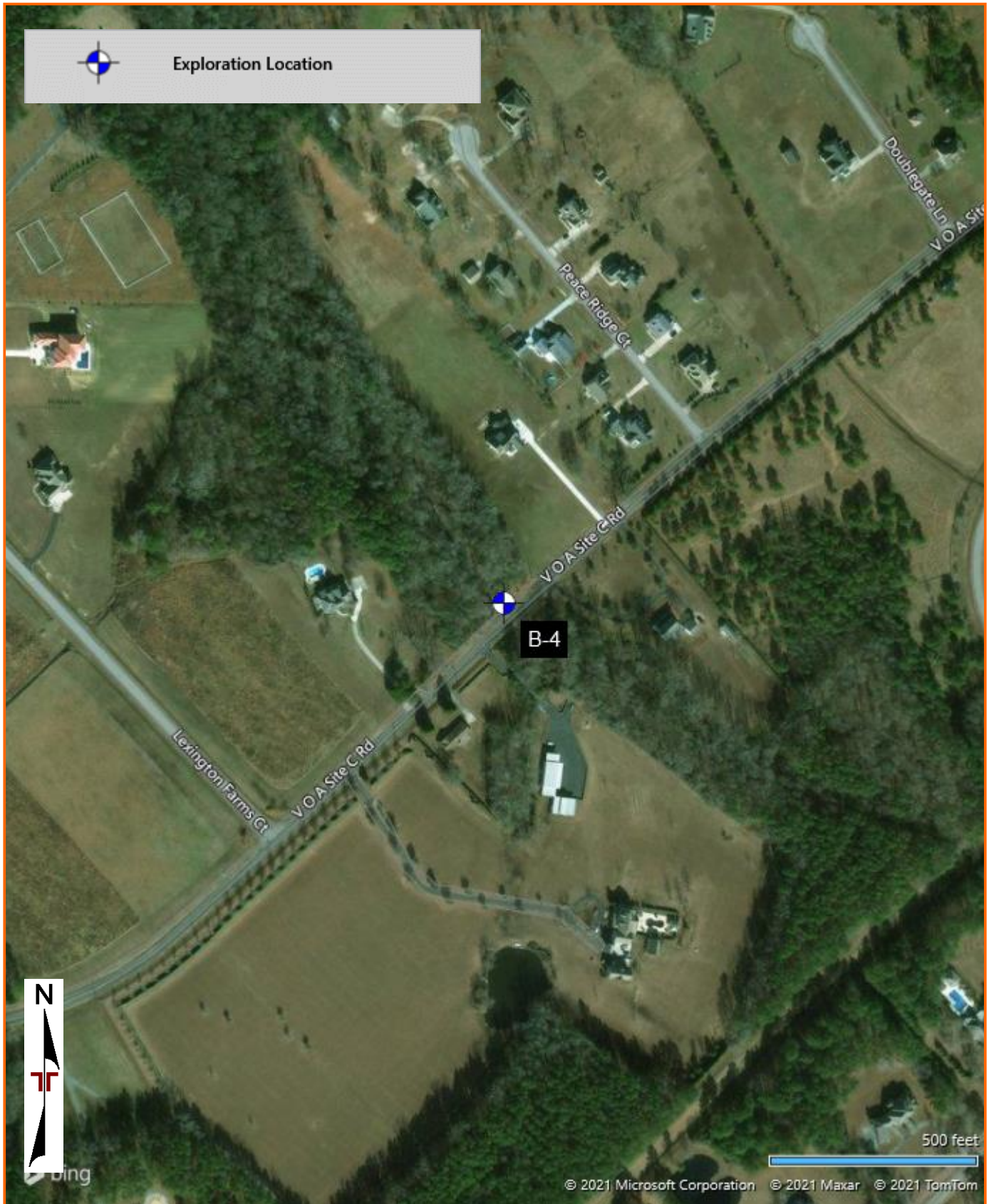


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

Boring Logs (B-1, B-2, and B-4)
Grain Size Distribution
Atterberg Limits

Note: All attachments are one page unless noted above.

BORING LOG NO. B-1

PROJECT: VOA Site C Road Gas Improvements

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: VOA Site C Road
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6102° Longitude: -77.5013° Approximate Surface Elev.: 60 (Ft.) +/- ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
1		TOPSOIL , 3 inches	0.3							
2		SILTY SAND (SM) , brownish gray to dark gray, very loose	5.0	▽	X	WOH	27.0			
3		POORLY GRADED SAND (SP) , brownish gray, loose	5.0	▽	X	WOH	32.7			
3		POORLY GRADED SAND (SP) , clay lense, brownish gray, very loose	8.0		X	2-3-4 N=7	20.1			
2		LEAN CLAY (CL) , trace sand, gray, very soft	13.0		X	1-1-2 N=3	19.3			
2		LEAN CLAY (CL) , trace sand, gray, very soft	20.0		X	WOH	57.7	48-25-23	86	
Boring Terminated at 20 Feet			20.0		X	WOH	60.0			

Stratification lines are approximate. In-situ, the transition may be gradual.
WOH = Weight of Hammer

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

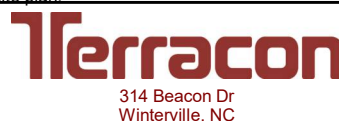
See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

WATER LEVEL OBSERVATIONS

- ▽ First Encountered
- ▽ At completion of drilling

Cave in



Boring Started: 11-19-2021

Boring Completed: 11-19-2021

Drill Rig: Geoprobe

Driller: MP

Project No.: 72215131

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72215131_VOA_SITE_C_ROAD_G.GPJ TERRACON_DATATEMPLATE.GDT 12/13/21

BORING LOG NO. B-2

PROJECT: VOA Site C Road Gas Improvements

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: VOA Site C Road
Greenville, NC

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 72215131 VOA SITE C ROAD G.GPJ TERRACON_DATATEMPLATE.GDT 12/13/21

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6117° Longitude: -77.5019°	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
										LL-PL-PI		
1			0.3	61.5+/-								
		TOPSOIL , 4 inches										
								1-1-0 N=1				
		CLAYEY SAND (SC) , dark gray, very loose										
2			3.0	59+/-								
		SILTY SAND (SM) , dark gray, very loose										
			5.0	57+/-	5			0-1-2 N=3	16.6			
		POORLY GRADED SAND (SP) , light brown, medium dense										
3			8.0	54+/-		▽		6-8-4 N=12				
		FAT CLAY (CH) , orange, very soft										
			13.0	49+/-	10			WOH	65.6			
		LEAN CLAY (CL) , gray, very soft to soft										
2			20.0	42+/-	15			WOH				
		LEAN CLAY (CL) , gray, very soft to soft										
		Boring Terminated at 20 Feet			20			0-0-2 N=2	55.9			

Stratification lines are approximate. In-situ, the transition may be gradual.
WOH = Weight of Hammer

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ *Observed while drilling*

Cave in



Boring Started: 11-19-2021

Boring Completed: 11-19-2021

Drill Rig: Geoprobe

Driller: MP

Project No.: 72215131

BORING LOG NO. B-4

PROJECT: VOA Site C Road Gas Improvements

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: VOA Site C Road
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6444° Longitude: -77.4754°	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
										LL-PL-PI		
1			0.3	69.5+/-								
		TOPSOIL , 3 inches										
2								1-1-1 N=2				
		SILTY SAND (SM) , dark gray, very loose										
			5.0	64.5+/-	5			WOH	42.4	21-19-2	42	
		SILTY SAND (SM) , dark gray to light gray, medium dense to dense										
								3-8-2 N=10	21.7			
								0-24-10 N=34	25.0			
								3-4-12 N=16	28.0			
3			18.0	51.5+/-								
		POORLY GRADED SAND (SP) , dark gray, medium dense										
			20.0	49.5+/-	20			4-6-7 N=13	25.7			
		Boring Terminated at 20 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.
WOH = Weight of Hammer

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

First Encountered

Cave in



Boring Started: 11-19-2021

Boring Completed: 11-19-2021

Drill Rig: Geoprobe

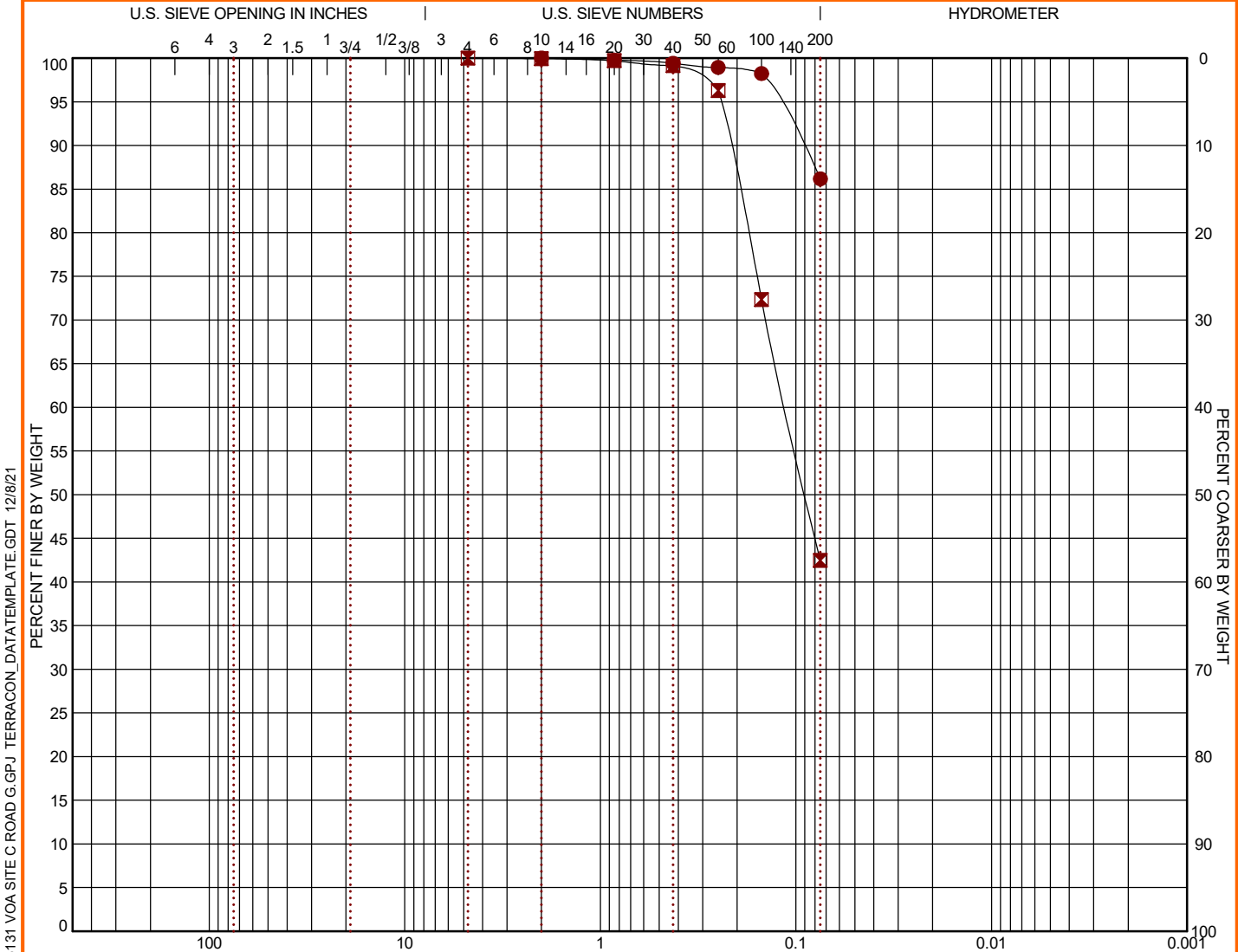
Driller: MP

Project No.: 72215131

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72215131_VOA SITE C ROAD G.GPJ TERRACON_DATATEMPLATE.GDT 12/13/21

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
● B-1	13.5 - 15	0.0	0.0	13.8		86.2		CL
✕ B-4	3.5 - 5	0.0	0.0	57.5		42.5		SM

GRAIN SIZE			
	●	✕	
D₆₀		0.113	
D₃₀			
D₁₀			
COEFFICIENTS			
●	✕		
C_c			
C_u			

●		✕			
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#10	100.0	#4	100.0		
#20	99.76	#10	99.95		
#40	99.41	#20	99.7		
#60	98.94	#40	99.15		
#100	98.23	#60	96.29		
#200	86.17	#100	72.36		
		#200	42.46		

SOIL DESCRIPTION	
●	LEAN CLAY (CL)
✕	SILTY SAND (SM)
REMARKS	
●	
✕	

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS 1 72215131 VOA SITE C ROAD G.GPJ TERRACON_DATATEMPLATE.GDT 12/8/21

PROJECT: VOA Site C Road Gas Improvements

SITE: VOA Site C Road
Greenville, NC



PROJECT NUMBER: 72215131

CLIENT: Greenville Utilities Commission
Greenville, NC

SUPPORTING INFORMATION

Contents:

General Notes

Unified Soil Classification System






Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

East Carteret High School Additions ■ Beaufort, NC

Terracon Project No. 72215115

SAMPLING	WATER LEVEL	FIELD TESTS
 Standard Penetration Test	 Water Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time  Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

LOCATION AND ELEVATION NOTES

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See [Exploration and Testing Procedures](#) in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELEVANCE OF SOIL BORING LOG

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
			$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I	
			$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	SP	Poorly graded sand ^I	
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G, H, I}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line	CL	Lean clay ^{K, L, M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K, L, M, N}
			Liquid limit - not dried			Organic silt ^{K, L, M, O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}	
			PI plots below "A" line	MH	Elastic Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K, L, M, P}
			Liquid limit - not dried			Organic silt ^{K, L, M, Q}
	Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

^E $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

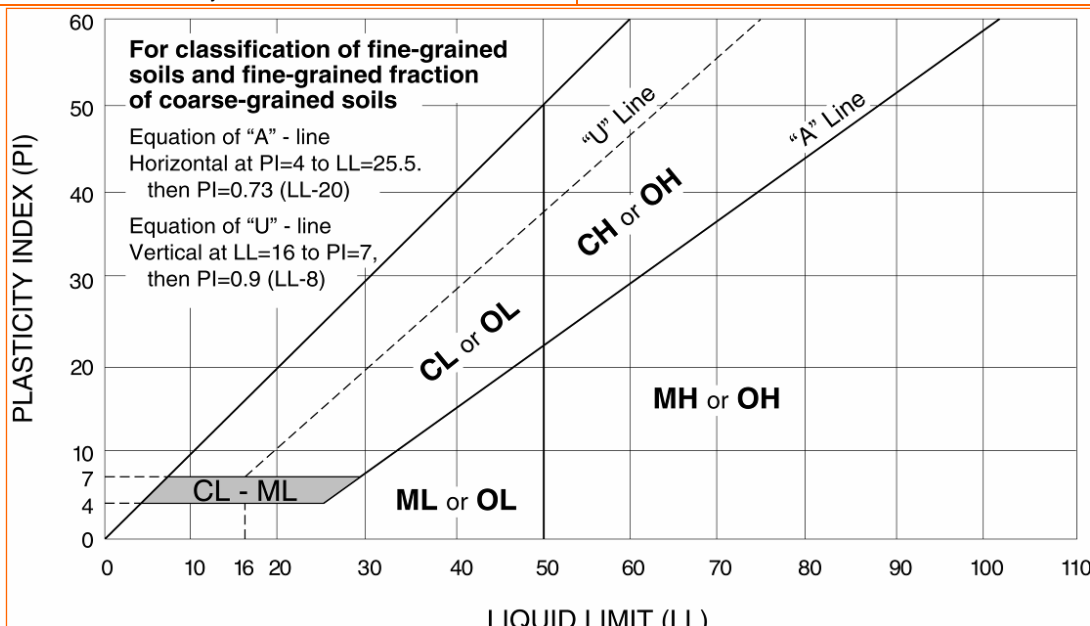
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT

-AND-

PRIMARY AND SECONDARY HIGHWAYS

Greenville Utilities Commission
401 S. Greene Street, Greenville, NC 27835

E021-074-22-00041

THIS AGREEMENT, made and entered into this the 7 day of FEBRUARY 20 22 by and between the Department of Transportation, party of the first part; and Greenville Utilities Commission party of the second part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) SR1200, SR1212, SR1213, located 1. At the intersection of SR1200 and SR1212. 2. At the intersection of SR1212 and SR 1213. 3. Along the RAW of SR 1212 for approximately 4 miles. 4. Crossing SR 1212, approximately 2400 feet North of the intersection of SR1212 and SR1211.

with the construction and/or erection of: 4 miles of 4" PE natural gas main installed along the RAW of SR1212. 1. Perpendicular bore under SR1200 approximately 50 LF. 2. Perpendicular bore under SR1213 approximately 50 LF. 3. 4 miles of 4" PE natural gas main installed along the RAW of SR1212. 4. Perpendicular bore under SR1212 approximately 50 LF.

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest UTILITIES ACCOMMODATIONS MANUAL and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utilities Manager of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to the installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials

and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

- c. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
 - (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

R/W (161) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (161) incorporating all revisions to date.

IN WITNESS WHEREOF, I, Jeff Labariss, as the Division Engineer, have caused this agreement to be executed the day and year first above written. **This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.**

DEPARTMENT OF TRANSPORTATION

DocuSigned by:
BY: Jeff Labariss

DIVISION ENGINEER

ATTEST OR WITNESS:

James McCarty
Finance Officer

Amy Wade
Amy Wade, Executive Secretary
Greenville Utilities Commission



Anthony C. Cannon
Anthony C. Cannon, General Manager / CEO
Greenville Utilities Commission
Second Party

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered city official is on file in the Raleigh office of the State Utilities Manager. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the existing and/or proposed encroachment.
4. Length, size and type of encroachment.
5. Method of installation.
6. Dimensions showing the distance from the encroachment to edge of pavement, shoulders, etc.
7. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
8. Drainage structures or bridges if affected by encroachment (show vertical and horizontal dimensions from encroachment to nearest part of structure).
9. Method of attachment to drainage structures or bridges.
10. Manhole design.
11. On underground utilities, the depth of bury under all traveled lanes, shoulders, ditches, sidewalks, etc.
12. Length, size and type of encasement where required.
13. On underground crossings, notation as to method of crossing - boring and jacking, open cut, etc.
14. Location of vents.

GENERAL REQUIREMENTS

1. Any attachment to a bridge or other drainage structure must be approved by the State Utilities Manager in Raleigh prior to submission of encroachment agreement to the Division Engineer.
2. All crossings should be as near as possible normal to the centerline of the highway.
3. Minimum vertical clearances of overhead wires and cables above all roadways must conform to clearances set out in the National Electric Safety Code.
4. Encasements shall extend from ditch line to ditch line in cut sections and 5' beyond toe of slopes in fill sections.
5. All vents should be extended to the right of way line or as otherwise required by the Department.
6. All pipe encasements as to material and strength shall meet the standards and specifications of the Department.
7. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
8. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.

The encroaching party's construction contractor must submit the NCDOT Workforce Safety Plan for Encroachment Activities: COVID-19 form to the District Engineer prior to construction. ABSOLUTELY NO WORK CAN BE ALLOWED WITHIN NCDOT R/W UNTIL THIS FORM HAS BEEN SUBMITTED!

Pre-Construction

Contact Offices & Outside Agency issues / contacts / info

1. Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the encroachment agreement.
2. The Encroaching party or their contractor shall provide the following notices prior to construction activity within the NCDOT Right of Way:
 - a. Three (3) business days advance phone call at telephone (252) 623-5300 or email to D2D1notifications@ncdot.gov to the District Engineer's office
 - b. If the construction falls within the limits of an NCDOT managed construction project, five (5) business days advance phone call to the Division Utility Engineer, Mr. David Kramer at (252) 649-6509 or email to dpkramer@ncdot.gov.Failure to provide these notifications prior to beginning construction is subject to the Division Engineer's discretion to cease construction activity for this encroachment. NCDOT reserves the right to cease any construction or maintenance work associated with this installation by the encroaching party until the construction or maintenance meets the satisfaction of the Division Engineer or their representative.
3. Prior to beginning work, it is the requirement of the Encroaching Party to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.
4. It shall be the responsibility of the encroaching party to determine the location of utilities within the encroachment area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The encroaching party shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.
5. The encroaching party shall notify the appropriate municipal office prior to beginning any work within the municipality's limits of jurisdiction.
6. Excavation within 1000 feet of a signalized intersection will require notification by the encroaching party to the Division Traffic Engineer at telephone number (252) 439-2816 no less than one week prior to beginning work. All traffic signal or detection cables must be located prior to excavation. Cost to replace or repair NCDOT signs, signals, pavement markings or associated equipment and facilities shall be the responsibility of the encroaching party.
7. This agreement does not authorize installations within nor encroachment onto railroad rights of way. Permits for installations within railroad right of way must be obtained from the railroad and are the responsibility of the encroaching party.
8. At the option of the District Engineer, a preconstruction meeting including representatives of NCDOT, the encroaching party, contractors and municipality, if applicable, shall be required. A pre-construction conference held between a municipality (or other facility owner) and a contractor without the presence of NCDOT personnel with subsequent construction commencing may be subject to NCDOT personnel ceasing any work on NCDOT right-of-way related to this encroachment until such meeting is held. Contact the District office to schedule.

9. At the discretion of the District Engineer, a NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W form (See corresponding attachment) with the scheduled pre-construction meeting and associated construction schedule details must be completed and submitted to the District Engineer's office a minimum of one week prior to construction.
10. At the discretion of the District Engineer, the encroaching party (not the utility contractor) shall make arrangements to have a qualified inspector, under the supervision of a Professional Engineer registered in North Carolina, on site at all times during construction. The registered Professional Engineer shall be required to submit a signed and PE sealed certification that the utility was installed in accordance with the encroachment agreement.

Legal & Right-of-Way Issues

11. This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the Division Engineer's office or their representative prior to construction or during construction if an issue arises during construction to warrant changes.
12. NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the encroaching party to verify the right of way.
13. Encroaching party shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.
14. All Right of Way and easements necessary for construction and maintenance shall be dedicated to NCDOT with proof of dedication furnished to the District Engineer prior to beginning work.
15. No commercial advertising shall be allowed within NCDOT Right of Way.
16. The encroaching party shall obtain proper approval from all affected pole owners prior to attachment to any pole.
17. The installation within the Control of Access fence shall not adversely affect the design, construction, maintenance, stability, traffic safety or operation of the controlled access highway, and the utility must be serviced without access from the through-traffic roadways or ramps.

Bonds

18. A Performance and Indemnity Bond in the amount of \$N/A shall be posted with the District Engineer's Office by the Party of the Second Part prior to beginning any work within the NCDOT Right of Way. The bond shall be held for a minimum of one year after a satisfactory final inspection of the installation by NCDOT. The bond may be held for a period longer than one year after completion if, in the opinion of NCDOT, the size or complexity of the installation warrants a longer period.
19. The release of the bond is subject to a final inspection by NCDOT. Contact the District office to schedule a Final Inspection and to request release of the bond.

Work Zone Traffic

20. Traffic control shall be coordinated with the District Engineer and the Division Traffic Engineer, Mr. Steve Hamilton. at (252) 439-2816, prior to construction.

21. WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG).

All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to <https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx> or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

22. The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:

- a. Manual on Uniform Traffic Control Devices (MUTCD) – North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).
- b. NCDOT Maintenance / Utility Traffic Control Guidelines – This document enhances the fundamental principles and best practices established in MUTCD Part 6, Temporary Traffic Control, incorporating NCDOT-specific standards and details. It also covers important safety knowledge for a wide range of work zone job responsibilities.

23. If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.

24. Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.

25. Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, **or as directed by the District Engineer**. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.
26. Nighttime and weekend operations will NOT be allowed unless written approval is received from the District Engineer. If nighttime or weekend work is allowed or required, all signs must be retro-reflective, and a work zone lighting plan must be submitted for approval prior to construction.
27. Two-way traffic shall be maintained at all times unless designated by the District Engineer. Traffic shall not be rerouted or detoured without the prior written approval from the District Engineer. No utility work will be allowed on state holidays from 7:00 PM the night before through 9:00 AM the day prior to, following or during local events without prior approval from the District Engineer. If the construction is within 1000 feet of a school location or on a designated bus route, the construction shall be coordinated with the school start and end times to avoid traffic delays.
28. Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.
29. Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current *NCDOT Roadway Standard Drawings* or *MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.
30. At the discretion of the District Engineer, a traffic control plan shall be developed and submitted under the seal and signature of a Licensed North Carolina Professional Engineer prior to construction. The plan shall be specific to the site and adequately detailed. Issues such as the close proximity to intersections shall be addressed.
31. Temporary and final pavement markings are the responsibility of the encroaching party. Final pavement markings and sign plans shall be submitted with the encroachment request to the Division Traffic Engineer prior to construction. Final pavement markings shall be thermoplastic unless otherwise directed by the Division Traffic Engineer or District Engineer.
32. Any pavement markings that are damaged or obliterated shall be restored by the encroaching party at no expense to NCDOT.
33. Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act Accessibility Guidelines. The encroaching party must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at <https://www.youtube.com/watch?v=AOuYa5IW3dg&feature=youtu.be>

Roadside Environmental

34. The encroaching party shall comply with all applicable Federal, State and local environmental regulations and shall obtain all necessary Federal, State and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species and historical sites. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at 252-439-2939.

35. When surface area in excess of one acre will be disturbed, the Encroacher shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the Right of Way. Failure to provide this information shall be grounds for suspension of operations. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with the approved sediment and erosion control plan.
36. The Verification of Compliance with Environmental Regulations (VCER-1) form is required for all non-utility encroachment agreements or any utility encroachments when land disturbance within NCDOT right of way exceeds 1 acre. The VCER-1 form must be PE sealed by a NC registered professional engineer who has verified that all appropriate environmental permits (if applicable) have been obtained and all applicable environmental regulations have been followed.
37. All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Encroacher in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.) shall be graded and seeded in accordance with the latest *NCDOT Standards Specifications for Roads and Structures* and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this encroachment shall be replaced with plants of like kind or similar shape.
38. No trees within NCDOT shall be cut without authorization from the Division Roadside Environmental Engineer. An inventory of trees measuring greater than 4 caliper inches (measured 6" above the ground) is required when trees within C/A right of way will be impacted by the encroachment installation. Mitigation is required and will be determined by the Division Roadside Environmental Engineer's Office.
39. Prior to installation, the Encroaching Party shall contact the District Engineer to discuss any environmental issues associated with the installation to address concerns related to the root system of trees impacted by boring or non-utility construction of sidewalk, roadway widening, etc.
40. The applicant is responsible for identifying project impacts to waters of the United States (wetlands, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division of Water Quality (NCDWQ). The applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. The applicant is responsible for complying with any river or stream Riparian Buffer Rule as regulated by the NCDWQ. The Rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ or the USACE.
41. The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the Division Engineer or their agent.
42. The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.

STIP (or Division Managed) Projects

43. State Transportation Improvement Project (STIP) **N/A** is scheduled for future construction. Any encroachment determined to be in conflict with the construction of this NCDOT project shall be removed and/or relocated at the encroaching party's expense.

Construction

General

44. An executed copy of the encroachment agreement, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
45. The Encroaching Party and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this encroachment, the District Office shall be notified by the encroaching party immediately if any violations are cited.
46. Any REVISIONS marked in RED on the attached non-PE sealed plans shall be incorporated into and made part of the approved encroachment agreement.
47. All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the Division Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.
48. The encroaching party shall notify the Division Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to its original condition as directed by the Division Engineer or their representative.
49. A minimum of 5 feet clearance is required for utility installations beneath or near drainage pipes, headwalls, and a minimum of two-foot clearance below the flowline of streams. If directional drilling, a minimum ten-foot clearance distance is required from drainage structures and a minimum of 5 feet below flowline of streams.
50. At points where the utility is placed under existing storm drainage, the trench will be backfilled with excavatable flowable fill up to the outside diameter of the existing pipe.
51. Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Zone. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.
52. No access to the job site, parking or material storage shall be allowed along or from the **Control of Access Roadway**.
53. Guardrail removed or damaged during construction shall be replaced or repaired to its original condition, meeting current NCDOT standards or as directed by the Division Engineer or their representative.
54. The resetting of the Control of Access fence shall be in accordance with the applicable NCDOT standard and as directed by the Division Engineer or their representative.

55. Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.
56. All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the Division Engineer or their representative.
57. Any utility markers, cabinets, pedestals, meter bases and services for meter reading required shall be as close to the Right of Way line as possible. If it is not feasible to install at or near Right of Way line, then written approval shall be obtained from NCDOT prior to installation.
58. Detection tape, where required by NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act, shall be buried in the trench approximately 1 foot above the installed facility. Where conduit is installed in the right of way and is not of ferrous material, locating tape or detection wire shall be installed with the conduit.
59. All driveways disturbed during construction shall be returned to a state comparable with the condition of the driveways prior to construction.
60. Conformance with driveway permit review should be required in conjunction with this encroachment agreement. In the event there is a conflict between the driveway permit and the encroachment agreement, the District Engineer should resolve the conflict and notify the parties involved.
61. If the approved method of construction is unsuccessful and other means are required, prior approval must be obtained through the District Engineer before construction may continue.
62. The encroaching party and their construction contractor must sign and submit the NCDOT *Workforce Safety Plan for Encroachment Activities: COVID-19* form to the District Engineer prior to construction.
63. The attached Duke Energy response to the NCDOT *COVID-19 Workforce Safety Plan* shall be applied for all employees on the job site unless otherwise directed by the District Engineer.

Engineering

64. All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: *ASTM Standards*, *Manual on Uniform Traffic Control Devices*, *NCDOT Utilities Accommodations Manual*, *NCDOT Standard Specifications for Roads and Structures*, *NCDOT Roadway Standard Drawings*, *NCDOT Asphalt Quality Management System* manual, **and the approved plans.**
65. Prior approval for any blasting must be obtained from the Division Engineer or their representative.
66. Regulator stations, metering stations, cathodic test stations, and anode beds are not permitted within NCDOT right of way. Header wires are permitted.
67. Non-Utility Communication and Data Transmission installations (ground mounted type or Small Cell pole-mounted type) must adhere to guidelines in the Utilities Accommodations Manual and, when located within municipal jurisdictions, are subject to review and approval by municipal ordinances and any additional municipal approval for proximity to historic districts and landmarks. All wiring and related telecommunications work shall conform to the latest regulations by the Federal Communications Commission.

68. All wiring and related electrical work shall conform to the latest edition of the National Electrical Safety Code.

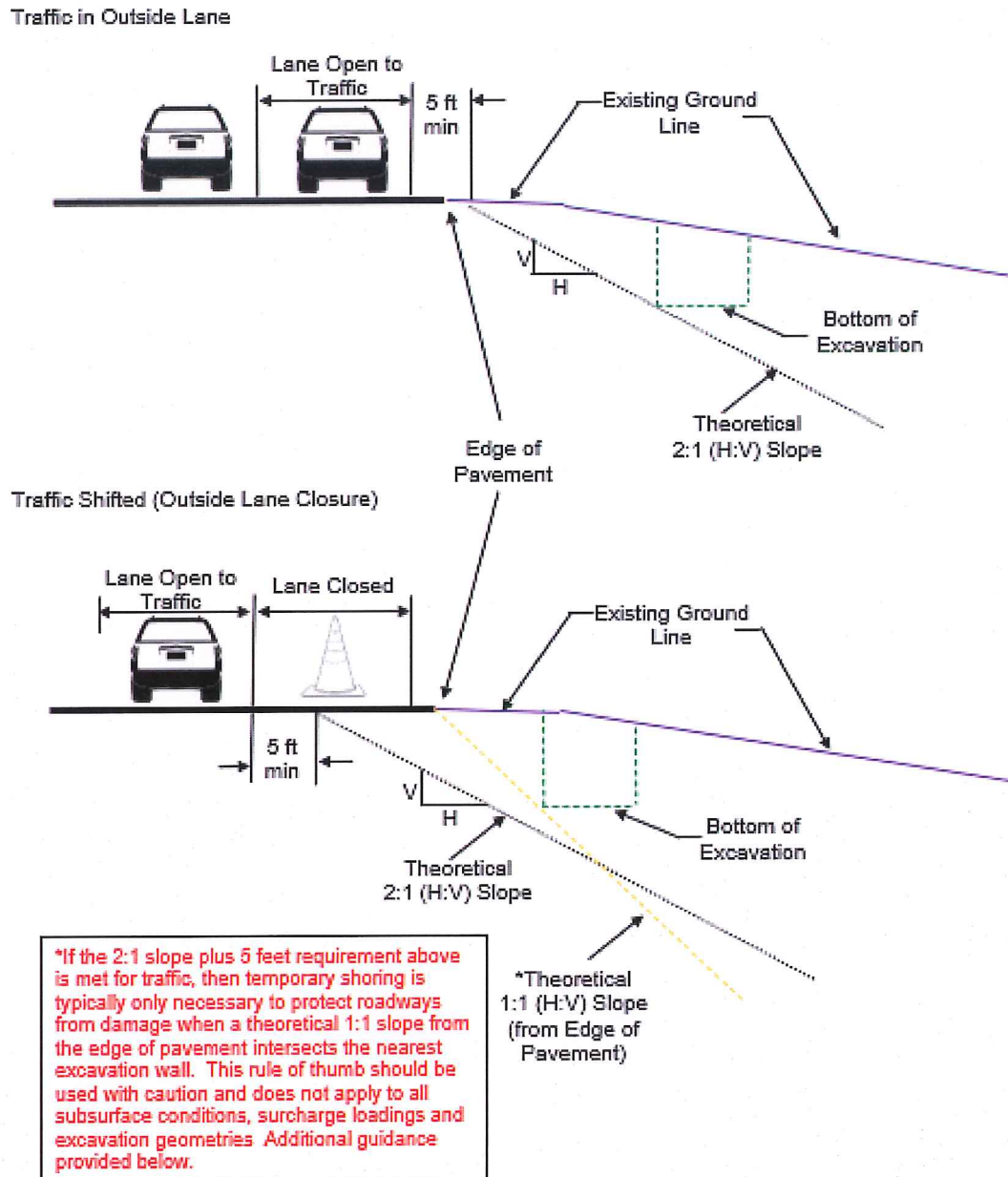
Location within R/W

69. All utility access points, such as manholes, vaults, handholes, splice boxes and junction boxes shall be located as close to the right of way line as possible and shall not be placed in the ditch line, side slopes of the ditches or in the pavement. All manholes, handholes, splice boxes, junction boxes and vaults and covers shall be flush with the ground when located within the vehicle clear zone. Slack loops for telecommunications in industry standard housing units shall be buried a minimum of 18 inches when buried or meet minimum NCDOT vertical and horizontal clearances when installed aerially.
70. Fire Hydrants shall be of the breakaway type. Hydrants shall be placed near the right of way line. In curb and gutter sections with written approval from the District, the hydrants may be placed at 6' behind the back of the curb or minimum 2' back of sidewalk.
71. Luminaire and/or utility poles and guy wires shall be set as close to the Right of Way line as practical and outside the Clear Zone in accordance with the latest version of the AASHTO Roadside Design Guide (See corresponding attachment) or made breakaway in accordance with the requirements of NCHRP Report 350. Any relocation of the utility poles from the original design due to Clear Zone requirements shall require a re-submittal for the utility design.
72. Luminaire and/or utility poles shall be set a minimum of 5'-6" behind face of any guardrail or otherwise sufficiently protected. However, standard placement may be reduced to 3'-6" behind face of guardrail when posts are spaced 3'-1 1/2", or where speed limit is less than 55 MPH.
73. Hot box (aka ASSE 1060) or Safe-T-Cover type enclosures covering utility main pipe joints, backflow preventers, valves, vent pipes, cross connections, pumps, grinders, irrigation assemblies, transformers, generators, and other similar large appurtenances shall be located outside sight distance triangles and off of the NCDOT Right-of-Way.
74. Sprinkler heads shall be located a minimum of 10 feet from the edge of pavement, edge of shoulder, or back of curb whichever is greater and shall be directed so that water does not spray or drain on the roadway surface, sidewalk, or passing vehicles at any time. Upon completion of the installation and prior to activation of the system, the Encroacher shall contact the District Engineer to schedule a test of the system to verify the spray pattern. Sprinkler systems shall not be operated during periods of high wind or freezing weather, or to the extent that the subgrade adjacent to the pavement structure becomes saturated. NCDOT reserves the right to require immediate termination and removal of any sprinkler system which in its judgement and opinion adversely affects safety, maintenance, or operation of the roadway.

Excavation

75. Excavation material shall not be placed on pavement.
76. It is the responsibility of the encroaching party or their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.

77. The utility shall be installed within 5 feet of the right of way line and outside the 5-foot minimum from travel lane plus theoretical 2:1 slope from the edge of pavement to the bottom of the nearest excavation wall for temporary shoring. Temporary shoring is required when a theoretical 2:1 slope from the bottom of excavation will intersect the existing ground line less than 5 feet from the outside edge of an open travel lane as shown in the figure below or when a theoretical 2:1 slope from the bottom of excavation will intersect any existing structure, support, utility, property, etc. to be protected.



If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries. Situations

where this 1:1 slope is not recommended include groundwater depth is above bottom of excavation or excavation is deeper than 10 feet or in [Type B or C soils as defined by OSHA Technical Manual](#). Temporary shoring may be avoided by locating trenches, bore pits, and other excavations far enough away from the open travel lane, edge of pavement and any existing structure, support, utility, property, etc. to be protected.

Temporary shoring shall be designed and constructed in accordance with current NCDOT Standard Temporary Shoring provisions (refer to <https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx> and see SP11 R002

- a. Temporary excavation shoring, such as sheet piling, shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by a licensed North Carolina Professional Engineer. Shoring plans and design calculations shall be submitted to the Division Engineer for review and approval prior to construction. (See NCDOT *Utilities Accommodations Manual* for more information on requirements for shoring plans, design calculations, and subsurface investigation report.) **Trench boxes shall not be accepted as temporary shoring and will not be approved for use in instances where shoring is required to protect the highway, drainage structure, and/or supporting pavement or structure foundation.**
 - b. All trench excavation inside the limits of the theoretical two-to-one slope plus 5 feet requirement, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight. Any excavation that is not backfilled by the end of the workday must address any safety and traveling public concerns including accommodations for bicycles, pedestrians and persons with disabilities.
 - c. The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest *NCDOT Standard Specifications for Roads and Structures*, which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by DOT.
 - d. At the discretion of the Division Engineer, a qualified NCDOT inspector shall be on the site at all times during construction. The encroaching party shall reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the encroaching party (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a licensed North Carolina Professional Engineer, on the site at all times. The Professional Registered Engineer shall certify that the utility was installed in accordance with the encroachment agreement and that the backfill material meets the Statewide Borrow Criteria.
 - e. The length of parallel excavation shall be limited to the length necessary to install and backfill one joint of pipe at a time, not to exceed twenty-five (25) feet.
78. All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade. The option to backfill any trenches with dirt or either #57 stone or #78 stone with consolidation with a plate tamp and without a conventional density test may be pursued with the written consent of the District Engineer. If this option is exercised, then roadway ABC stone and asphalt repair as required will also be specified by the District Engineer.

Directional bore

79. Boring equipment will be provided of a type and size to facilitate boring in the local geologic conditions and shall be able to facilitate the encroachment work.

80. When Horizontal Directional Drilling (HDD) is used, the following stipulations apply:

- a. Use drilling fluids as appropriate for the type soils but use of water alone is prohibited. Pump drilling fluids only while drilling or reaming. Directional boring using jetting with a Bentonite (or equivalent material) slurry is recommended. Monitor flow rates to match the amount leaving the bore hole and do not increase pressure or flow to free stuck drill heads, reamers or piping. Open cutting to retrieve stuck drill heads is not allowed without prior permission from the District Engineer.
- b. The minimum depth shall adhere to the table below for transverse (under non-controlled access, partial controlled access, or limited controlled access roadway) installations and refers to maximum diameter of hole drilled and not the dimension of the carrier or encasement pipe.

<u>Diameter of Drilled Hole (Backream)</u>	<u>Minimum Depth of Cover</u>
2" to 6"	5 feet
>6" to 15"	12 times hole diameter (e.g. 6-inch hole means 6 feet minimum depth)
>15" to 36"	15 feet or greater

- c. Under fully controlled access roadway installations, the minimum depth for transverse crossings shall be 15 feet under any pavement (ramps or thru lanes)
- d. An overbore (backream diameter) shall not be more than 1.5 times the outside diameter of the pipe or encasement under any highway for pipes 12 inches in diameter or less. For pipes with outer diameter larger than 12 inches, the overbore may be no larger than outer diameter of pipe plus 6 inches. An overbore exceeding 1.5 times greater than the outside diameter of the pipe or encasement may be considered if the encroachment agreement includes a statement signed and sealed by a licensed North Carolina Professional Engineer indicating that an overbore in excess of 1.5 times the outside diameter of the pipe or encasement will appropriately arch and no damage will be done to the pavement or sub-grade.
- e. Directional boring is allowed beneath embankment material in naturally occurring soil.
- f. Any parallel installation utilizing the directional boring method shall be made at a minimum depth of five (5') feet (cover) below the ground surface and outside the theoretical 1:1 slope from the existing edge of pavement except where the parallel installation crosses a paved roadway.
- g. All directional bores shall maintain ten (10) feet minimum (clear) distance from the nearest part of any structure, including but not limited to bridges, footings, pipe culverts or box culverts. Directional bores are not allowed beneath bridge footings, culvert wingwall footings, slope protection or retaining walls.
- h. The tip of the drill string shall have a cutter head.
- i. Detection wire shall be installed with non-ferrous material.
- j. HDPE pipe installed by directional boring shall not be connected to existing pipe or fittings for one (1) week from the time of installation to allow tensional stresses to relax.

Aerial clearances

81. Vertical clearance of overhead power and communication lines shall meet the National Electrical Safety Code requirements except the minimum vertical clearance shall be 18' for crossings over NCDOT roadways (24' over Fully Controlled Access roadways) and 16' for parallel installations.
82. In relation to the bridge, the utility line shall be located with minimum clearances as indicated on the attachment for NCDOT **Required Clearances for Aerial Installations by Encroachment Near Bridge Structures**.

Pavement Detail and Repair

83. The paving of this roadway shall be in accordance with the latest version of NCDOT Standard Specifications, Sections 610, 1012 and 1020. The Contractor shall follow all procedures of the Quality Management System (QMS) for asphalt pavement - Maintenance Version (see <https://connect.ncdot.gov/resources/Materials/MaterialsResources/2018%20QMS%20Asphalt%20Manual.pdf>). The Contractor must adhere to all testing requirements and quality control requirements specified. The Contractor shall contact the NCDOT Division QA Supervisor prior to producing plant mix and make the Supervisor aware that the mix is being produced for a future NCDOT road. Contact the District Engineer to determine the NCDOT Division QA Supervisor. Only NCDOT approved mix designs will be acceptable. A Quality Control Plan shall be submitted (as Directed by the District Engineer) to the District Engineer's Office prior to asphalt production utilizing form QMS-MV1. Failing mixes and/or densities are subject to penalties including monetary payments or removal and replacement. To minimize traffic queuing in construction areas, the possibility of traffic detours may be considered when working on high traffic routes even if traffic control is used. The District Engineer may require traffic detours.

84. When paving beyond utility installation is involved, a Roadway certification report sealed by a Professional Engineer shall be submitted to the District Engineer's office indicating the following:

- Pavement thickness by type
- Pavement density, core and/or test locations
- Base thickness
- Base density
- Subgrade density

Test frequency and method shall be in conformance with the NCDOT *Materials and Tests Manual*.

Test must be performed by a Certified Technician including name and Certification number on report.

85. "Potholing" pavement cores to expose existing utilities shall be made with an 18" diameter keyhole pavement core. Pavement core locations shall not be placed in the wheel path whenever possible. Vacuum excavation shall be utilized to expose underground utilities. Pavement cores shall be repaired within the same working day. The pavement core shall be retained and reused to fill the core hole.

The excavation shall be backfilled and compacted with select material to the bottom of the existing pavement structure or as indicated by the District Engineer. The retained core shall be placed in the hole and secured with a waterproof, mechanical joint. If the pavement core is damaged and cannot be re-used, the core may be replaced with the surface mix, S9.5B. The asphalt patch shall match the thickness of the existing asphalt or four inches, whichever is greater. All materials must be listed on the NCDOT Approved Products List (APL) found at:

<https://apps.ncdot.gov/vendor/approvedproducts/>.

86. The minimum pavement design for pavement repair shall be according to NCDOT Standard Drawing 654.01 (<https://connect.ncdot.gov/resources/Specifications/2018StandardRdwyDrawings/Division%2006%20Asphalt%20Bases%20and%20Pavements.pdf>) and shall include a mechanical overlay extent to be a minimum of 25 feet each side of the pavement repair area OR as directed by the District Engineer.
87. Pavement cuts shall be repaired the same day the cuts are made unless an asphalt patch cannot be accomplished the same day due to material availability or time restrictions. When the asphalt patch is not feasible, the following apply:
- a. The pavement cut shall be filled to the surface with ABC stone or Flowable Fill per NCDOT's Standards and Specifications.
 - b. Once the cut is filled, a minimum ¾-inch steel plate shall be placed and pinned to prevent moving. Plates shall be designed large enough to span a minimum of 1-foot on all sides on the pavement cut.
 - c. When flowable fill is used, it shall cure for 24 hours prior to any asphalt material placement. Flowable fill bleed water shall not be present during paving operations. Paving shall not cause damage (shoving, distortion, pumping, etc.) to the flowable fill.
 - d. Install and leave "BUMP" signs according to MUTCD until the steel plate has been removed. Once the flowable fill has cured, remove the steel plate, and mill/fill according to the directions of the District Engineer.
 - e. All pavement cuts must be sealed with NCDOT approved sealant to prevent future pavement separation or cracking.
88. Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform encroachment work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Encroaching Party.

Post Construction

Close out/ Inspection

89. The Encroaching party shall notify the District Engineer's office within 2 business days after construction is complete. The District Engineer may perform a construction inspection. Any deficiencies may be noted and reported to the encroaching party to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.
90. At the discretion of the District Engineer, a final inspection report may be provided to the encroaching party upon satisfactory completion of the work.
91. A written acknowledgement of the completed work by the District Engineer's office begins the one-year warranty period associated with the performance bond.
92. If the actual construction differs from the approved plans associated with this encroachment, a copy of "as-built" plans shall be submitted to the District Engineer's office in a PDF format and in a current ESRI GIS format within 4 weeks of construction.
93. A copy (in PDF format) of the completed ground water analysis shall be given to the District Engineer, including detailed drawings of the "as-built" wells showing location, depth and water level in well.

ATTACHMENT FORM

NOTIFICATION FOR UTILITY / NON-UTILITY ENCROACHMENT WITHIN NCDOT R/W

Instructions for use:

This form must be completed in its entirety and submitted directly to the designated personnel in the District Engineer's office via email, fax or hand delivery a minimum of one week prior to construction for the encroachment. If the designated NCDOT personnel names are unknown by the person completing this form, please contact the District Engineer's office to determine that contact info.

Date: _____ Submitted by Name: _____

To: District Personnel Name: _____
District Personnel Email: _____
District Fax No.: _____

This notification is to inform you that we (encroaching party or their contractor) will begin construction work on the following project in a minimum of one week.

Encroachment number

(assigned by NCDOT) for the project: _____

Construction start date: _____

Approximate ending date: _____

Contact NCDOT inspector a minimum of 72 hrs. in advance to set-up Preconstruction meeting in the District Engineer's office or other location as directed by the District Engineer

Preconstruction meeting date & time: _____

Preconstruction meeting address: _____

Type of project: _____
[Examples: power, telecommunication, water, sewer, gas, petroleum, other (describe)]

Contact Info for this project:

Contractor Company Name: _____

Contractor Contact Name: _____

Contractor Phone Number: _____

Contractor Email: _____

NCDOT Utility Inspector Name: _____

NCDOT Utility Inspector Phone: _____

NCDOT Utility Inspector Email: _____

NCDOT Utility Project Manager Name: _____

NCDOT Utility Project Manager Phone: _____

NCDOT Utility Project Manager Email: _____

WORKFORCE SAFETY PLAN

FOR ENCROACHMENT ACTIVITIES: COVID-19

EFFORTS THE N.C. TRANSPORTATION INDUSTRY IS TAKING TO STOP THE SPREAD OF COVID-19

The North Carolina Department of Transportation (NCDOT) and their partners expect all parties involved in the delivery of transportation projects to abide by the guidelines issued from the Centers for Disease Control and Prevention (CDC) and the North Carolina Department of Health and Human Services (NCDHHS).

Response to COVID-19 is rapidly evolving; new information and guidelines may be issued from the CDC, NCDHHS, or other state or federal agencies. NCDOT and their partners should review the current CDC and NCDHHS guidance, including the resources listed at the end of this document, for up-to-date information on how to respond to COVID-19. Additional guidelines may be issued by state or federal agencies that should be followed in addition to the guidance included in this document.

Though certain Americans with Disabilities Act (ADA) requirements have been relaxed in response to the pandemic, employers must still maintain all information about employee illness as a confidential medical record in compliance with the ADA. If an employee is suspected of having or tests positive for COVID-19, it is essential that management keep the identity of the employee and details related to the employee's health confidential.

Below are precautions required by NCDOT and from encroaching parties and their contractors performing construction within NCDOT Rights of Way. The term employee refers to any person on a job site within NCDOT right of way for the purpose of constructing or inspecting the work related to construction of a facility under an approved encroachment agreement and where that employee may or may not be under employment by or under contract to NCDOT.

EMPLOYEE WELLNESS

- If an employee has not yet reported to work and develops any COVID-19 symptoms (i.e. fever, coughing, or shortness of breath) — STAY HOME and immediately:
 - Call a health care provider
 - Self-Isolate
 - Communicate with your supervisor
 - Remain calm and follow all instructions from your health care provider
- Employees who appear to have acute respiratory illness symptoms (i.e. cough, shortness of breath) upon arrival to work, or become sick during the day, should be separated from others and sent home immediately. The potentially affected employees should immediately follow the steps outlined above, which includes immediately contacting a health care provider.
- Should an employee show symptoms of acute respiratory illness or be diagnosed with COVID-19, all other employees who have worked in close proximity to the affected employee during the last 14

days and all encroachment points of contact indicated at the end of this plan should be notified of potential exposure to the disease without identifying the affected employee.

- Consideration should be given to employees at “High Risk” of severe illness from COVID-19, who, per NCDHHS, include employees:
 - Over 65 years of age, **OR**
 - With underlying health conditions including heart disease, lung disease, or diabetes, **OR**
 - With weakened immune system
- “High Risk” Employees should be given the opportunity to discuss alternate work arrangements/duties with their employer or take leave according to their company policies.
- For guidance on confirmed positive tests for COVID-19, refer to the most recent version of the “COVID-19 Guidance for Employees on Encroachment Job Sites within NCDOT Right of Way” located on last page of this plan.

PERSONAL HYGIENE

- Clean hands often by washing with soap and water for 20 seconds. If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains 60%-95% alcohol may be used.
- Avoid touching your eyes, nose, mouth, or other parts of your face.
- Do not breathe, cough, or sneeze on another person or into the open air. Employees should cover their noses and mouth with a tissue when coughing or sneezing (or an elbow or shoulder if no tissue is available).
- A facemask for covering nose and mouth is encouraged on the job site.
- Appropriate gloves are encouraged while performing functions of the job.

CLEANING/DISINFECTING

- Wash stations and/or hand sanitizer are encouraged on each project site.
- Appropriate cleaning staff should clean frequently touched surfaces and objects with disinfectants at a minimum of once per day.
 - Office/buildings: door knobs, light switches, phones, computers/keyboards, copy machines, elevator buttons, toilets, faucets, sinks, countertops, paper towel dispensers, desktops, handrails, folders, vending machines, counters, tables, cabinets/knobs, etc.
 - Shop Yard/Jobsite: vehicle/equipment door handles, keys, gear shifts, steering wheel/operator controls and levers, fuel pump dispensers, touch points on machinery, etc.
 - Electronic equipment: cell phones, computers, keyboards, etc.
- Appropriate cleaning staff should sanitize/disinfect facilities and work areas after persons suspected/confirmed to have COVID-19 have been in the facility or work area.

- It is recommended to close off access to areas used by the ill persons and wait as long as practical, 24 hours if possible, before beginning cleaning and disinfection to minimize potential for exposure to respiratory droplets. Open outside doors and windows to increase air circulation in the area if possible.
- Appropriate cleaning staff should clean and disinfect all areas used by the ill persons, focusing especially on frequently touched surfaces.

GENERAL

- Increase communication measures between all parties regarding schedule, daily activities, etc. to reduce/minimize worker exposure in accordance with but not limited to the requirements below.
- Minimize on-site personnel such as subcontractors, work crews, QC personnel, and inspection staff to those required for that day's activities. If work is postponed or cancelled, immediately notify appropriate parties.
- Practice "Social Distancing" whenever feasible. Social Distancing is designed to limit the spread of a disease by reducing the opportunities for close contact between people. All personnel have the responsibility to remind each other to stay 6 feet or more apart. Examples of Social Distancing include:
 - Reducing face-to-face exposure by using conference calls and video conferencing
 - If an in-person meeting is absolutely required and cannot be rescheduled or attended remotely, the meeting is limited to a maximum of 10 people while maintaining Social Distancing of 6 feet or more.
 - Avoiding unnecessary travel
- Do not congregate at lunch or breaks. Bringing your lunch is encouraged.
- No communal coolers or drink stations are allowed. Supervisors should confirm with employees prior to beginning work for appropriate hydration and nutrition availability to employees for the duration of the employee's shift and without direct contact with others on the job site.
- First line of communication should be by phone, rather than in-person.
- Do not shake hands.
- Do not share iPads, tablets, pens, or clipboards for signing or any other purpose. Take pictures as proof of attendance at meetings.
- Sharing of Personal Protective Equipment (PPE) is strictly prohibited.
- Vehicles, equipment, and tools
 - Limit the number of people riding in a vehicle together.
 - Wipe down and disinfect vehicles after each trip.
 - As much as possible, do not share tools or equipment. If a tool or piece of equipment must be shared, the parts of it that are touched should be sanitized between uses.

RETURN TO WORK

- The following criteria must be followed for an employee who is tested for Covid-19, or asked to self-quarantine by health officials, or has contact with another employee with a positive test result to return to work:
 - at least a 14-day quarantine; **OR**
 - release by a health care provider.
- In accordance with CDC guidance, the following criteria must be followed for an employee with a positive test result to return to work:
 - at least 14 days from positive test notification; **AND**
 - at least 3 days (72 hours) have passed since recovery defined as resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms (e.g., cough, shortness of breath); **AND**
 - at least 7 days have passed since symptoms first appeared.

NCDOT may require certification of fitness to work from a health care provider.

ADDITIONAL RESOURCES

NCDOT and their partners should review the CDC and NCDHHS resources listed below for up-to-date information on how to respond to COVID-19. Additional guidelines may be issued by state or federal agencies that should be followed in addition to the guidelines included in this document.

- NCDHHS COVID-19 Resources:
 - <https://www.ncdhhs.gov/divisions/public-health/coronavirus-disease-2019-covid-19-response-north-carolina>
- NCOSHR Communicable Disease Emergency Policy
 - <https://oshr.nc.gov/policies-forms/workplace-wellness/communicable-disease-emergency>
- OSHA Guidance on Preparing Workplaces for COVID-19
 - <https://www.osha.gov/Publications/OSHA3990.pdf>
- CDC COVID-19 Resources:
 - <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

AGREEMENT

The encroaching party shall adhere to the requirements of this plan in order to continue work under their approved encroachment agreement. Violations to this plan could result in the violating entity not being allowed to continue work or all work ceasing as determined by the NCDOT District Engineer or Resident Engineer.

PROJECT POINTS OF CONTACT

Workforce Safety Plan: COVID-19

NCDOT Encroachment ID#: _____

NCDOT

Name: Ryan Beacham

Phone #: 252-623-5300

Encroaching Party (Primary Contact)

Greenville Utilities Commission

Name: F. D. Tyson, Jr., Assist Director of Gas Systems




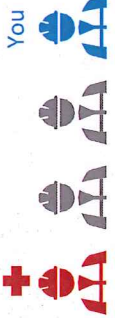
Phone #: 252-551-2048

**Primary Contractor to Encroaching Party
(Point of Contact)**

Name: To be determined

Phone #: _____

Note: Revised Workforce Safety Plan with updated Primary Contractor to be submitted to NCDOT upon award of construction contract.

COVID-19 Guidance for Employees on Encroachment Job sites within NCDOT Right of Way			
CONTACT GROUP			
Relationship to Confirmed POSITIVE Test	What YOU Should Do	What your CREW Should Do <i>Exposure within 6' and longer than 10 minutes</i>	What PROJECT SITE Personnel Should Do <i>No exposure within 6' and longer than 10 minutes</i>
Employee	<p>Notify your supervisor Self-quarantine for 14 days</p> 	<p>Advise of POSITIVE test without identifying the affected employee* Directly exposed crew self-quarantine for 14 days Continue hygiene & disinfecting measures</p>	<p>No exposure within 6' and longer than 10 minutes Advise of POSITIVE test without identifying the affected employee* Site personnel without direct contact may continue onsite work or follow their company policy Continue hygiene & disinfecting measures</p>
Direct Contact <i>Interaction with an infected person within 6' and longer than 10 minutes</i>	<p>Self-quarantine for 14 days</p> 	<p>Advise of POSITIVE test without identifying the affected employee* Crew may continue onsite work or follow their company policy Continue hygiene & disinfecting measures</p>	<p>Advise of POSITIVE test * Continue hygiene & disinfecting measures</p>
Secondary Contact	<p>You may continue onsite work or follow your company policy Continue hygiene & disinfecting measures</p> 	<p>Continue hygiene & disinfecting measures</p>	<p>Continue hygiene & disinfecting measures</p>
Two or more Persons Removed from Contact	<p>Continue hygiene & disinfecting measures</p> 	<p>Continue hygiene & disinfecting measures</p>	<p>Continue hygiene & disinfecting measures</p>
*Notification Protocol <i>(Comply with HIPAA & ADA confidentiality requirements)</i>	<p>NCDOT employee / agent tests POSITIVE</p>	<p>NCDOT District Engineer/Resident Engineer notifies Encroaching Party's primary point of contact and Contractor Point of Contact, CDC and, if Resident Engineer has oversight for the job site, FHWA any Consultant Firms working for NCDOT Encroaching party representative notifies other Contractors, Sub-Contractors and Suppliers with exposed Employees</p>	
	<p>Encroaching Party or Contract crew member on job site tests POSITIVE</p>	<p>Encroaching party representative or Contractor point of contact notifies appropriate NCDOT District Engineer or Resident Engineer and all other Contractors, Sub-Contractors and Suppliers with exposed Employees NCDOT notifies CDC, and as appropriate, FHWA and any Consultant Firms working for NCDOT</p>	

ROY COOPER

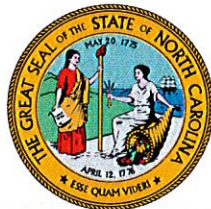
Governor

ELIZABETH S. BISER

Secretary

BRIAN WRENN

Director



NORTH CAROLINA
Environmental Quality

March 21, 2022

LETTER OF APPROVAL WITH MODIFICATIONS

Greenville Utilities Commission
Attn: Mr. Anthony C. Cannon, General Manager/CEO
P.O. Box 1847
Greenville, NC 27835

RE: Project Name: GUC GCP-10112 VOA Site C Road Natural Gas Enhancements
Project ID: Pitt-2022-011
County: Pitt
City: Greenville
Address: VOA Site C Road
River Basin: Neuse / Tar-Pamlico
Date Received by LQS: February 22, 2022
Submitted By: Rivers and Associates, Inc.
Plan Type: New

Acres Approved: 3.2

Dear Sir,

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable with modifications and hereby issue this letter of Approval with Modifications. The Modifications Required for Approval are listed on the attached page. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction General Permit. After the form is reviewed and found to be complete, you will receive a link with payment instructions for the \$100 annual permit fee. After the fee is processed, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. The eNOI form may be accessed at deq.nc.gov/NCG01. Please direct questions about the eNOI form to the [Stormwater Program staff](#) in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.



North Carolina Department of Environmental Quality | Division of Energy, Mineral and Land Resources
Washington Regional Office | 943 Washington Square Mall | Washington, North Carolina 27889
252.946.6481

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Program is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, it is determined that the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. This permit allows for a land-disturbance, as called for on the application plan, not to exceed the approved acres. Exceeding the acreage will be a violation of this permit and would require a revised plan and additional application fee. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project.

Please be advised that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0233) applies to the 50-foot wide zone directly adjacent to surface waters (intermittent streams, perennial streams, lakes, ponds, and estuaries) in the Neuse River Basin. For more information about this riparian area rule, please contact the Division of Water Resources Wetland/401 Unit at 919-807-6300, or DWR in our regional office at 252-946-6481.

Please be advised that a rule to protect and maintain existing buffers along watercourses in the Tar-Pamlico River Basin became effective on January 1, 2000. The Tar-Pamlico River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0259) applies to a 50 (horizontal) foot wide zone along all perennial and intermittent streams, lakes, ponds and estuaries in the Tar-Pamlico River basin. For more information about the riparian area rule, please contact the Division of Water Quality's Wetland/401 Unit at 919-807-6300, or DWQ in our regional office at 252-946-6481.

Sincerely,



Samir Dumpor, PE
Regional Engineer
Land Quality Section

cc w/o enc: Anthony C. Cannon, Greenville Utilities Commission (email)
Durk Tyson, PE, Greenville Utilities Commission (email)
Seth Anderson, PE, Rivers and Associates, Inc. (email)
WaRO Division of Water Resources (email)

1. The developer is responsible for the control of sediment on-site. If the approved erosion and sedimentation control measures prove insufficient, the developer must take those additional steps necessary to stop sediment from leaving this site (NCGS 113A-57(3)). Each sediment storage device must be inspected after each storm event (NCGS 113A-54.1(e)). Maintenance and/or clean out is necessary anytime the device is at 50% capacity. All sediment storage measures will remain on site and functional until all grading and final landscaping of the project is complete (15A NCAC 04B .0113).
2. The developer is responsible for obtaining all permits and approvals necessary for the development of this project prior to the commencement of this land disturbing activity. This could include our agency's Stormwater regulations and the Division of Water Resources' enforcement requirements within Section 401 of the Clean Water Act, the U.S. Army Corps of Engineers' jurisdiction of Section 404 of the Clean Water Act, the Division of Coastal Management's CAMA requirements, the Division of Solid Waste Management's landfill regulations, the Environmental Protection Agency and/or The U.S. Army Corps of Engineers jurisdiction of the Clean Water Act, local County or Municipalities' ordinances, or others that may be required. This approval cannot supersede any other permit or approval.
3. Adequate and appropriate measures must be properly installed downstream, within the limits of disturbance, of any land disturbing activity to prevent sediment from leaving the limits of disturbance, entering existing drainage systems, impacting an on-site natural watercourse or adjoining property. (NCGS 113A-57)

PROJECT INFORMATION SHEET

APPROVAL DATE: March 21, 2022

RESPONSIBLE PARTY: Greenville Utilities Commission

PROJECT NAME: GUC GCP-10112 VOA Site C Road Natural Gas Enhancements

COUNTY: Pitt NO.: Pitt-2022-011

OFF-SITE BORROW
AND/OR DISPOSAL SITE: _____ NO.: _____

START-UP DATE: _____

CONTRACTOR: _____

ON-SITE CONTACT: _____

ON-SITE PHONE NO.: _____

OFFICE PHONE NO.: _____

**COMPLETE & RETURN THIS FORM
PRIOR TO THE START OF CONSTRUCTION TO:**

**N.C.D.E.Q.
LAND QUALITY SECTION
ATTN: *James Edwards*
943 WASHINGTON SQUARE MALL
WASHINGTON, NORTH CAROLINA 27889
james.edwards@ncdenr.gov**

CERTIFICATE OF PLAN APPROVAL



The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environmental Quality in accordance with North Carolina General Statute 113A - 57 (4) and 113A - 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b). **GUC GCR 1012 VOA Site C Rd. Gw 15A**

VOA Site C Road, Pitt County

Project Name and Location

3/21/22

Date of Plan Approval

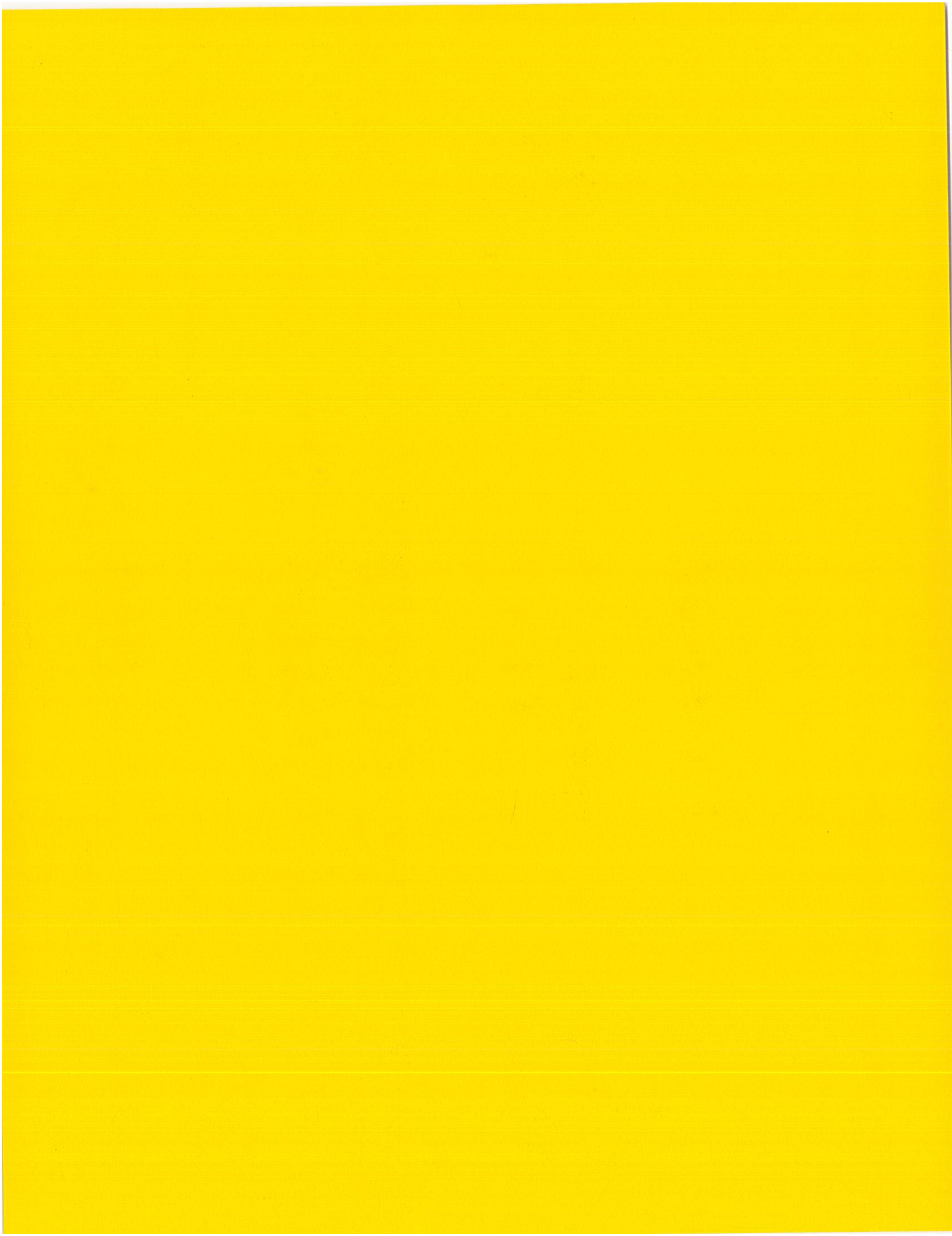
Sevin Dumper

Regional Engineer



Pitt-2022-011

Certificate of Coverage Number



Certificate of Coverage

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

GENERAL PERMIT NO. NCG010000

NC Reference No. NCG01-2022-1297
Certificate of Coverage No. NCC221297

STORMWATER DISCHARGES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Greenville Utilities Commission

is hereby authorized to discharge stormwater associated with CONSTRUCTION ACTIVITIES to surface waters of North Carolina from a site located at:

GCP-10112 VOA Site C Road Natural Gas Enhancements
SR-1212 (VOA Site C Road)
Arthur
Pitt County

in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in N.C. General Permit No. NCG010000.

This Certificate of Coverage is affiliated with **E&SC Plan Project No.** Pitt-2022-011

This Certificate of Coverage shall become effective 4/13/2022.

This Certificate of Coverage shall remain in effect until rescinded or expired.

This Certificate of Coverage will expire on the anniversary of its effective date unless it is renewed by payment of the annual administration and compliance fee.



for Brian Wrenn
Director, Division of Energy, Mineral, and Land Resources
By the Authority of the Environmental Management Commission