

VOLUME I - FRONT ENDS  
CONTRACT DOCUMENTS AND SPECIFICATIONS

for

Killian Creek WWTP Upgrade Phase 3

November 2018

WKD # 20170294.00.CL

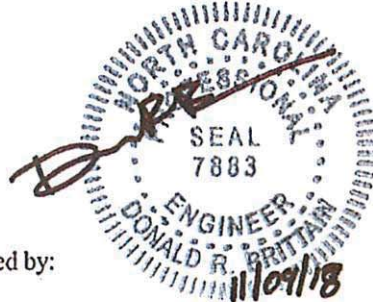
CWSRF Project No. CS 370825-02

Prepared for

Lincoln County  
115 West Main Street  
Lincolnton, NC 28092

FINAL DESIGN

NOT RELEASED FOR CONSTRUCTION



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Lincoln County, North Carolina  
Killian Creek Phase WWTP Upgrade Phase 3  
WKD Project #20170294.00.CL

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**LINCOLN COUNTY  
DENVER, NORTH CAROLINA  
KILLIAN CREEK WWTP UPGRADE PHASE 3**

ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of the **Killian Creek WWTP Upgrade Phase 3** will be received by **Lincoln County, C/O John Henry, Purchasing Agent at Lincoln County, 353 N. General Blvd., Executive Conference Room, Lincolnton, NC 28092**, until **2:00 PM EST** local time on **Thursday, April 2, 2020**, at which time the Bids received will be **“publicly”** opened and read. The Project consists of **supplying, installation, startup and related construction services associated with the expansion of the existing Killian Creek wastewater treatment plant as summarized below on a lump sum bid.**

**All bids must be submitted in a sealed envelope and plainly labeled on the outer most package “RFB-2020-0402 - KILLIAN CREEK WWTP UPGRADE PHASE 3.” The Inside and outside package shall include the Contractor’s License Number.**

- A. New influent headworks, Sequencing Batch Reactor System (SBR) flow splitter and related slide gates and electric actuators.
- B. New SBR, Post Equalization, Aerobic Digester and Sludge Holding Tank System including concrete basin structure, blowers, jet aeration mixers, sludge transfer pumps, and related controls incorporating the existing SBR system into a four (4) SBR basin system.
- C. Modifications to existing SBR system to include changeout of existing blower sheaves to increase blower speed and capacity, modifications to influent flow splitter/electrically actuated gates, addition of influent drop boxes and diffuser pipes in each SBR basin and modification to existing SBR control system to integrate controls into the new four (4) SBR basin control system.
- D. New Effluent Filters Building with two (2) new effluent disk filters and three (3) relocated existing disk filters and related controls.
- E. New effluent Ultraviolet (UV), dual channel disinfection system installed in existing effluent building with related controls and building modifications.
- F. New waste activated sludge (WAS) sludge thickener and related sludge transfer pumps, polymer feed system, piping and controls.
- G. Modifications to existing RTD sludge building to add a hot water tank and tepid eye wash.
- H. New sludge pump station including sludge grinder, rotary lobe pumps and related transfer piping and controls.
- I. Modifications in existing sludge pump building to add hot water heater and tepid water mixing valve to supply existing safety shower/eye washes with tepid water.
- J. New sludge dewatering building including two (2) new rotary sludge filter presses, polymer feed systems, sludge conveyors and related controls.
- K. New caustic chemical feed pumps capable of caustic addition to the new SBR tanks and digesters.
- L. New chemical feed system associated with phosphorus removal including storage tank, recirculation pump and chemical metering pumps and controls in a precast concrete building.
- M. Related site grading, storm water drainage, erosion/sediment control, site piping and roads.

Bids will be received for a single prime Contract. Bids shall be on a lump sum and unit price basis, with additive alternate bid items as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is: **W.K. Dickson & Co., Inc., 1213 W. Morehead Street, Suite 300, Charlotte, NC 28208, Contact: Angela Hall at (828) 327-6911 (Project Administrator) or via email at [ahall@wkdickson.com](mailto:ahall@wkdickson.com)**. Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of **8:00 a.m. – 5:30 p.m.** and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Bidding Documents may be viewed and ordered online by registering with the Plan Room at **[www.wkdickson.com](http://www.wkdickson.com)**. **Please note that only Registered Plan Holders may submit a bid as a General Contractor.** Following registration, complete sets of Bidding Documents may be downloaded from the Issuing Office's website as "zipped" portable document format (PDF) files. The cost of printed Bidding Documents from the Issuing Office will depend on the number and size of the Drawings and Project Manual, applicable taxes, and shipping method selected by the prospective Bidder. Cost of Bidding Documents and shipping is non-refundable. Upon Issuing Office's receipt of payment, printed Bidding Documents will be sent via the prospective Bidder's delivery method of choice; the shipping charge will depend on the shipping method chosen. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents. Partial sets of the Bidding Documents will not be available from the Issuing Office.

A pre-bid conference will be held at **2:00 P.M. EST** local time on **March 10, 2020** at the **Killian Creek Wastewater Treatment Plant located at 7085 Old Plank Road, Stanley, NC**. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

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

Lincoln County reserves the right to reject all bids, to waive informalities and technicalities, and to cancel the Bid Process at any time.

Owner: **Lincoln County**  
By: **Don Chamblee**  
Title: **Director of Public Works**  
Date: **February 10, 2020**

+ + END OF ADVERTISEMENT FOR BIDS + +

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

## SUGGESTED INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACTS

Prepared by



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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. Bidder - the individual or entity who submits a Bid directly to Owner.
  - B. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
  - C. Successful Bidder - The lowest qualified, responsible, and responsive Bidder to whom Owner (based on Owner's evaluation as herein provided) makes an award.

## **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

- 2.01 Complete sets of the Bidding Documents may be examined at: W.K. Dickson & Co., Inc., 616 Colonnade Drive, Charlotte, NC 28205. Plans, Specifications, and Contract Documents are available for purchase by going to Plan Room at [www.wkdickson.com](http://www.wkdickson.com). Please note that only registered plan holders may bid as a General Contractor.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

## **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

- 3.01 To demonstrate Bidder's qualifications to perform the Work, with their Bid, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- A. By completing Document C-451, Qualifications Statement, and such data as may be requested by the Owner or Engineer and called for below.
  - B. Experience with wastewater treatment plant expansions of similar size and scope.
  - C. Evidence of Bidder's authority to do business in the state of North Carolina or to obtain such qualification prior to award of the Contract.
  - D. Bidder's state or other contractor license number, if applicable.
  - E. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others".
  - F. Other required information regarding qualifications.
- 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 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

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

4.01 *Site and Other Areas*

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

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:
  - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
  - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
  - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
  - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
4. Geotechnical Baseline Report: The Bidding Documents contain a Geotechnical Baseline Report (GBR). The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.

The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices,

nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

#### 4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours and shall not disturb any ongoing operations at the Site. A site visit may be performed as part of the Pre-Bid Conference or by appointment by contacting:
  - Mr. Tim Simmons, Operator of Record Charge
  - Killian Creek WWTP
  - 7085 Old Plank Road
  - Stanley, NC 28164
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

#### 4.04 *Owner's Safety Program*

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

#### 4.05 *Other Work at the Site*

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

### **ARTICLE 5 – BIDDER’S REPRESENTATIONS**

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

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

- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 6 – PRE-BID CONFERENCE**

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

#### **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

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

#### **ARTICLE 8 – BID SECURITY**

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 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 (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

## **ARTICLE 9 – CONTRACT TIMES**

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

## **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

## **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

The Engineer's intent is to consider alternative products which have the desired essential characteristics. The Engineer will consider any such products offered. Requests for acceptance of alternative products shall be made through Bidders bidding as Prime Contractors. Acceptances for substitutions will not be granted directly to suppliers, distributors, or subcontractors. Pursuant to Section 133-3, General Statutes of North Carolina, the following procedures shall be used:

1. Bidders desiring to submit alternative product proposals for prior acceptance of the Engineers shall submit, in writing, such proposals a minimum of 15 days prior to the deadline for receiving bids. Applications received after this time will not be reviewed. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute, including drawings, cuts, performance and test data, and other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or other work that incorporation of the substitute would require shall be included. The Engineer shall consider and either accept or reject all alternative product proposals submitted.
2. If, by the close of the fifth day prior to the deadline for receiving Bids, the Engineer has accepted any alternative product proposals, the Bidding Documents shall be modified to include the alternative products. The Engineer shall publish the modification in an Addendum at least 5 days prior to the deadline for receiving Bids. The Engineer's decision of acceptance or rejection of a proposed substitute shall be final.

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

## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for those portions of the Work for which identification is required.
- If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.04 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, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.
- 12.05 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 6.06.
- 12.05 The Lincoln County has adopted a 10% Minority Business Enterprise (MBE/WBE) Goal on this project in accordance with North Carolina General Statute 136-28.4. The document, *requirements for Recruitment and Selection of Minority Businesses Enterprises for Participation in NCDOT Contracts* including Affidavits and Appendix E are hereby incorporated into and made a part of this contract.



## **ARTICLE 13 – PREPARATION OF BID**

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each 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.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership’s address for receiving notices shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm’s address for receiving notices shall be shown.
- 13.05 A Bid by an individual shall show the Bidder’s name and address for receiving notices.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture’s address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

## **ARTICLE 14 – BASIS OF BID**

- 14.01 Base Bid with Alternates
- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
  - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

#### 14.02 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “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.

#### ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “**BID ENCLOSED**”. A mailed Bid shall be addressed to, Lincoln County, C/O John Henry, Purchasing Agent, 353 N. Generals Blvd., Executive Conference Room, Lincolnton, NC 28092 and plainly marked on the outside as **RFB 2020-0402- Killian Creek WWTP Phase 3 Upgrade**.
- 15.03 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 16 – MODIFICATION AND WITHDRAWAL OF BID

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

without forfeiting the Bid security does not apply to Bidder's errors in judgment in preparing the Bid.

#### **ARTICLE 17 – OPENING OF BIDS**

- 17.01 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 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

#### **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
  - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
  - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.
- 19.06 The evaluation of Suppliers' or manufacturers' data submitted with the Bid, or submitted upon request prior to the Notice of Award, will include consideration of the following:
1. Owner-required inventory of spare parts.
  2. Building design changes which would be required to accommodate the proposed materials and equipment.
  3. Installation requirements and related engineering, training, and operating costs.
  4. Experience and performance record of the Supplier or the manufacturer.
  5. Maintenance and frequency of inspections required to assure reliable performance of the equipment.
  6. The Suppliers' or manufacturers' service facilities and availability of qualified field service personnel.
  7. Efficiency and related operating expense during the anticipated useful life of the equipment.

#### **ARTICLE 20 – BONDS AND INSURANCE**

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

#### **ARTICLE 21 – SIGNING OF AGREEMENT**

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

#### **ARTICLE 22 – SALES AND USE TAXES**

- 22.01 North Carolina state and County sales are to be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

#### **ARTICLE 23 - WAGE RATE REQUIREMENTS**

- 24.01 The prevailing wage rates of the State of North Carolina apply to this contract as do any requirements of the State of North Carolina associated with the use of these State Prevailing wages.
- 24.02 The prevailing wage rates of the Department of Labor apply to this project. The Labor Standards Provisions found at 29 CFR 5.5(a) apply to this project if the prevailing wage rates of the Department of Labor apply.

## **ARTICLE 24 - DISPUTE RESOLUTION**

25.01 Lincoln County and North Carolina General Statute requires a mandatory dispute resolution process to be incorporated into Town construction projects. Refer to the Supplementary Condition, Article 16 – Dispute Resolution.

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DOCUMENT 00 31 00  
AVAILABLE PROJECT INFORMATION

1.1 SUMMARY

- A. Document Includes information available for bidders:
  - 1. Subsurface investigation report.
- B. Related Documents:
  - 1. Document EJCDC<sup>®</sup> - Instructions to Bidders: Site Examination Section Includes:

1.2 SUBSURFACE INVESTIGATION REPORT

- A. A copy of a geotechnical report is included with this document, titled “Report of Subsurface Exploration and Geotechnical Engineering Evaluation for Killian Creek WWTP Phase 3 Upgrade”, dated April 13, 2018, and prepared by Southern Engineering.
  - 1. This report identifies properties of below grade conditions and offers recommendations for design of foundations, prepared primarily for use of Engineer.
  - 2. Recommendations described are not requirements of this Contract, unless specifically referenced in Contract Documents. (54 pages)
  - 3. This report, by its nature, cannot reveal all conditions existing on the site. Should subsurface conditions be found to vary substantially from this report, changes in design and construction of foundations will be made, with resulting credits or expenditures to Contract Price/Sum accruing to Owner. (61 pages)
- B. A copy of a geotechnical report is included with this document title “Amended Report of Subsurface Exploration and Geotechnical Engineering Evaluation for Killian Creek WWTP Phase 3 Upgrade”, dated September 29, 2018, and prepared by Southern Engineering.

1.3 NCDEQ EROSION CONTROL APPROVAL

- A. A copy of the NCDEQ Letter of Approval of Modifications, Project ID: LINCO-2019-007 is attached for reference. Please note page 3, Modifications Required for Approval. (3 pages).

1.4 NCDEQ AUTHORIZATION TO CONSTRUCT

- A. A copy of the NCDEQ Authorization to Construct Permit No. 088722A03 (4 pages) is attached for reference.

1.5 Lincoln County Plan Review Application has been submitted, Parcel ID#89400/3691-45-6075 for:

- A. Effluent Filter Building, Permit #19-05071
- B. Sludge Pump Building, Permit #19-05072
- C. Sludge Dewatering Building, Permit #19-05070
- D. Rotary Drum Thickener Building, Permit #19-05069

- E. Blower Building, Permit #19-05068
- F. Chemical Feed Building, Permit #19-05066, and
- G. Appendix D, Affidavit of Worker's Compensation Coverage. Once contract awarded, General Contractor will need to fill out contractor information, as well as Affidavit of Workers' Compensation Coverage form and Lien via [www.liensnc.com](http://www.liensnc.com) and return to Tammy Wells with Lincoln County Planning and Inspections Dept. WK Dickson to provide forms to GC.

END OF SECTION



# ***SOUTHERN ENGINEERING***

**Consulting • Engineering • Construction Testing • Special Inspections**

## **AMENDED REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION**

**FOR**

### **KILLIAN CREEK WWTP PHASE 3 UPGRADE Lincoln County, North Carolina**

**PREPARED FOR**

**Lincoln County  
115 W. Main Street  
Lincolnton, NC 28092**

***SE&T* Project No.: 18-159  
September 29, 2018**

***SOUTHERN ENGINEERING AND TESTING, P.C.***  
6120 Brookshire Boulevard, Suite A, Charlotte, NC 28216  
(704) 557-0070 Office • (828) 468-8300 Office 2 • (704) 910-3516 Fax

# **SOUTHERN ENGINEERING**

Consulting • Engineering • Construction Testing • Special Inspections

September 29, 2018

Mr. Don Chamblee, P.E.  
Lincoln County  
115 W. Main Street  
Lincolnton, NC 28092

**Amended Report of Subsurface Exploration  
and Geotechnical Engineering Evaluation  
Killian Creek WWTP Phase 3 Upgrade  
Lincoln County, North Carolina  
SE&T Project No.: 18-159**

Dear Mr. Chamblee,

*SOUTHERN ENGINEERING* has completed the authorized subsurface exploration and geotechnical engineering evaluation for the planned Killian Creek WWTP Phase 3 Upgrade project in Lincoln County, North Carolina. The enclosed report is the amended geotechnical report for this project. This report supersedes and replaces to the original geotechnical report issued on April 13, 2018. The recommendations contained in this report can be used for the purposes of final design and construction.

This report describes the field exploration procedures and presents the results of our testing and engineering evaluation along with geotechnical related design and construction recommendations for this project. Additionally, the report amendments address changes to the plant expansion location as provided to us by W.K. Dickson.

Because of design and construction changes that occur on a project, questions often arise concerning subsurface conditions. *SOUTHERN ENGINEERING* would be pleased to continue its role as the Geotechnical Engineer of Record (GER) during the project implementation.

We appreciate the opportunity to work with you during the design phase of this project. During construction we can provide the recommended construction materials testing and special inspection services. We would be pleased to offer these services to Lincoln County, NC.

Sincerely,

*SOUTHERN ENGINEERING AND TESTING, P.C.*

NC License No. C-4167



Richard E. Finnen, Jr., P.E.  
Principal

Enclosures



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***SOUTHERN ENGINEERING AND TESTING, P.C.***

6120 Brookshire Boulevard, Suite A Charlotte, NC 28216  
(704) 557-0070 Office • (828) 468-8300 Office 2 • (704) 910-3516 Fax

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## SCOPE OF SERVICES

The scope of this subsurface exploration and geotechnical engineering evaluation was outlined in proposal number 17-10325 dated November 13, 2017. Authorization to perform this scope of service is in the form of a signed Contract for Services between Lincoln County, North Carolina and *SOUTHERN ENGINEERING*. The primary objectives of this service were to evaluate the subsurface conditions within the area of planned construction and to make recommendations regarding foundation design. More specifically, this study included the following:

- (1) Evaluate the existing subsurface soil and groundwater conditions within the area of the planned building addition area
- (2) Provide recommendations concerning site preparation and grading
- (3) Recommend foundation types that can safely and economically support the planned construction, evaluate the allowable bearing pressures of the foundation subsoils encountered during the exploration for support of shallow foundations and provide our estimates of foundation settlement.
- (4) Provide the IBC 2009 (NC State Building Code 2012) site classification.
- (5) Recommend a design modulus of subgrade reaction value for the planned concrete slab-on-grade and slab foundations.
- (6) Provide recommendations for earth pressure coefficients for use in design of foundation walls
- (7) Evaluate the suitability of on-site soils for reuse as engineered fill
- (8) Recommendations for achieving high-density structural fill
- (9) Provide recommendations concerning quality control measures during construction.

The scope of this study does not include an environmental assessment or testing and sampling the soil, water, or air for the presence of hazardous materials.

## FIELD AND LABORATORY PROCEDURES

### Field Exploration

The subsurface exploration included nineteen soil test borings advanced within the planned Killian Creek Phase 3 Upgrade. Additionally, eight observation pits were excavated in areas of proposed excavation. The test borings were advanced to depths ranging from approximately 12 to 25 feet below the existing ground surface. An ATV-mounted geotechnical drill rig equipped with a safety hammer was used to drill the soil borings and to testing. Standard penetration testing (SPT) was performed at selected intervals in the soil test boring to sample the subsurface. The SPT N-values, in conjunction with soil classifications, are indicative of a soil's engineering characteristics. The observation pits were excavated with a Caterpillar 320E crawler excavator equipped with spade-type teeth.

The locations of the soil borings were staked at the site by others. Several boring locations were off-set due to steeply sloping ground that was not accessible with the drill rig. Ground surface elevations were not provided. The approximate locations of the borings are provided on the boring test location plan.

The borehole logs provide detailed descriptions of the soils encountered and the encountered subsurface conditions. The appendix also includes groundwater conditions, penetration resistances, and other pertinent information. The soil classifications provided on the boring logs also include our evaluation of the geologic origin of the soils. These evaluations are based on our experience and interpretation.

## **Laboratory Testing**

The laboratory investigation consisted of a physical examination and classification of samples obtained from our investigation. Classification of the soil samples was performed in general accordance with ASTM D-2488 (Visual-Manual Procedure for Description of Soils). Soil classifications include the use of the Unified Soil Classification System as described in ASTM D-2487 (Classification of Soils for Engineering Purposes). The results of the soil laboratory tests are presented and summarized in the appendix of this report.

## **GENERAL SITE AND SUBSURFACE CONDITIONS**

### **Site Location and Description**

The subject site is located at 7085 Old Plank Road in Stanley, North Carolina. The site is the existing Killian Creek Waste Water Treatment Plant (WWTP) with the proposed Phase 3 Upgrade is to be located northwest and adjacent to the existing facility. Additionally, upgrades to the headworks structure and a new filter building is planned within the existing facility. The subject site is heavily wooded with hardwood and softwood trees. The site has two ridgelines divided by a swale that traverses the central western portion of the site.

The topographic information was included provided on the provide site drawing. The site topography rises and then drops sharply across the northwest portion of the site. In the northwest portion of the site elevations of approximately EI 710 and EI 675 in the vicinity of the swale. Based on the provided site plan, the elevation of the existing Killian Creek WWTP structures appear to be EI 680. Therefore, we anticipate that site earth cuts to fills on the order of 30 feet are anticipated.

### **Regional Geology**

Geological conditions of the area are primarily associated with the Piedmont Physiographic region of North Carolina. With exception of soils deposited in low-lying areas due to erosion, the site soils are derived in place due to the weathering of parent bedrock. The predominant bedrock reported in this location is composed of metamorphosed quartz diorite. Soils in this area have been formed by the in-place weathering of the underlying bedrock, which accounts for their classification as “residual” soils.

Residual soils near the ground surface, which have experienced advanced weathering, frequently consist of clayey silt (ML) or silty clay (CL). With increased depth, the soil becomes less weathered, coarser grained, and the structural character of the underlying parent rock becomes more evident. These residual soils are typically classified as sandy micaceous silt (ML) or silty micaceous sand (SM). With a further increase in depth the soils eventually become quite hard and take on an increasing resemblance to the underlying parent rock. When these materials have a standard penetration resistance of 100 blows per foot or greater, they are referred to as partially weathered/decomposed rock. The transition from soil to partially weathered rock is usually a gradual one and may occur at a wide range of depths. Lenses or layers of partially weathered rock are not unusual in the soil profile.

Partially weathered rock represents the one of transition between the soil and bedrock from which the soils are derived. The subsurface profile is in fact, a history of the weathering process which the crystalline rock has undergone. The degree of weathering is most advanced at the ground surface, where fine grained soil may be present. The weathering process is in its early stages immediately above the surface of relatively sound rock, where partially weathered rock may be found.

The thickness of the zone of partially weathered rock and the depth to the rock surface have both been found to vary considerably over relatively short distances. The depth to the rock surface may frequently range from the ground surface to 60 feet or more. The thickness of partially weathered rock, which overlies the rock surface may vary from only a few inches to 40 feet or more.

### **General Subsurface Conditions**

The stratification of the soil conditions at the actual soil test boring locations follows. Variations in the subsurface may occur away from the test borings. It is important to note that, whereas the soil borings were performed by experienced drillers and reviewed by an experienced geotechnical engineer, it is sometimes difficult to record changes in the subsurface within narrow limits. As a result, the interpretations of thicknesses, depths, and composition of various strata presented within this section are subject to a certain degree of error and may vary away from the test boring locations.

Topsoil was encountered in each of the test borings at the ground surface. The thickness of the topsoil was approximately 3 to 6 inches. The topsoil thickness should be expected to vary throughout the site and may be thicker in the vicinity of large trees, swales and creeks present at the site.

Existing fill, or man-placed materials, were encountered in borings 159-17, 159-18 and 159-19. The existing fill consisted of sandy Silt (ML) and silty Sand (SM) and extended to depths ranging from approximately 8 to 10 feet below the existing ground surface. The existing fill had SPT N-values ranging from 7 to 18 indicating that the materials are medium stiff and medium dense. The SPT N-values suggest that the fill was placed and compacted in a controlled manner.

Beneath the existing fill in borings 159-17, 159-18 and 159-19, and below the topsoil in the remaining soil test borings, residual or weathered in place materials were encountered. The residual materials generally classified as sandy Silty (ML) and silty Sand (SM). The SPT N-values ranged from 5 to 18 blows per foot and were moist.

Partially weathered rock, which are residual materials that exhibit an SPT N-value greater than 100 blows per foot, were encountered beneath residual materials in borings 159-1, 159-2, 159-3, 159-4, 159-5, 159-7, 159-8, 159-9, 159-10, 159-11, 159-12, 159-13, 159-14, 159-16 and 159-17. The depth to partially weathered rock ranged from 2 to 23 feet below the existing ground surface. **The excavation characteristics and suitability of partially weathered rock can vary significantly depending upon the consistency of these materials. It may be prudent to excavate observations pits in the areas of potential earth cut and in borrow areas to further characterize the partially weathered rock materials for the purposes of this project.**

Residual materials that that refuse the advancement of the soil test auger are considered to be sound rock. Auger refusal which indicates sound rock, was encountered in boring 159-1, 159-12, 159-13 and 159-14 at depths ranging from approximately 12 to 20 feet below the existing ground surface. **We anticipate that pneumatic jackhammers mounted on heavy crawler excavators (Hoe-Ram), pre-drilling and blasting techniques may be required to remove these materials. Additionally, the shot rock my likely not be suitable for reuse as structural fill.**

Groundwater was not encountered at the time of drilling in the soil test borings. It should be noted that groundwater levels will fluctuate depending on seasonal variations of precipitation and other factors, and may occur at higher elevations at some time in the future. Each test boring was backfilled upon completion to prevent a potential hazard to pedestrian traffic. For more detailed descriptions of subsurface soil and groundwater conditions, please refer to boring log section of the appendix.

## PROPOSED CONSTRUCTION

Project information has been supplied by Mr. Don Chamblee, P.E. of Lincoln County, North Carolina. A site plan including proposed test boring locations prepared by W.K. Dickson was provided to us.

We understand that the proposed WWTP expansion will roughly double the process capacity of the existing plant. We anticipate that the final finished elevations of the different elements of the WWTP expansion will be near the same elevations of the existing WWTP. We understand that the construction will consist of reinforced concrete with several smaller brick and block and pre-fabricated metal buildings. The buildings will include concrete slabs on grade. Earth cut and fill on the order of 15 to 30 are anticipated during site development.

Actual foundations loads were unknown at the time of this report. We anticipate continuous wall loads of approximately 2 to 3 kips per lineal foot and column loads on the order of 50 to 75 kips for the Filter Building. Other loading, specific to the various process components are unknown. We anticipate that much of these structures will utilize reinforced concrete retaining structures with thickened slab and mat-type foundations. We are available to review these foundation loadings as they relate to the encountered subsurface conditions when available and to provide supplemental recommendations if needed.

If the loads stated above are less than the actual loads in the final design or if the existing building foundations are loaded, *SOUTHERN ENGINEERING* should be contacted to assess the applicability of the following recommendations. Also, if any below grade construction is planned, our recommendation may no longer be valid and subsequent recommendations will need to be issued.

## GENERAL COMMENTS

When the plans and specifications are complete, or if significant changes are made in the character or location of the proposed construction, a consultation should be arranged to review the changes with respect to the prevailing soil conditions. At that time, it may be necessary to submit supplementary recommendations.

All sheeting, shoring, and bracing of trenches, pits and excavations should be made the sole responsibility of the contractor and should comply with all current and applicable local, state and federal safety codes, regulations and practices, including the Occupational Safety and Health Administration (OSHA) and North Carolina State and local government requirements.

## EVALUATIONS AND RECOMMENDATIONS

The following recommendations are based on the information available on the convenience center, the data obtained from the soil test borings and our experience with soils and subsurface conditions similar to those encountered at this site. Because the soil borings represent a very small statistical sampling of subsurface and existing foundation conditions, it is possible that conditions uncovered during construction may differ substantially from those encountered in this exploration. In these instances, adjustments to the design and construction may be necessary depending on actual conditions.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology. No other warranties are implied or expressed.

### General Site Preparation

Trees stumps, grass, topsoil, roots, and other deleterious materials should be removed from the planned construction area and 10 feet beyond. Special attention should be given to the removal of tree stumps and roots. Extensive root systems and localized soft soils are commonly encountered during removal of stumps. Site clearing, grubbing, and stripping should be performed only during dry weather conditions. Operation of heavy equipment on the site during wet conditions could result in excessive mixing of topsoil and organic debris with clean underlying soils.

Upon completion of the stripping and grubbing operations, the existing subgrade should be proofrolled. Proofrolling should be performed with a fully-loaded (20 cubic yards minimum capacity) on-road tandem-axle dump truck. We recommend that truck hauls lanes be coordinated such that the fully-loaded dump trucks pass over the areas to receive structural fill prior to unloading to aid in the compaction efforts. Areas of structural fill should be proofrolled each day prior to the start of filling, at the end of each day of operation and after any rainfall or precipitation event. Compaction testing should be performed to verify that the required degree of compaction is available prior to placement of structural fill. Additionally, areas of proposed excavation should be proofrolled as previously indicated after rough finished grade has been established.

Proofrolling should be performed under the observation of *SOUTHERN ENGINEERING* to determine if localized unstable soils are present near the ground surface that require remedial action. Proofrolling should facilitate the identification of soft surficial soils but should not be expected to reveal soft or unstable conditions deeper than approximately 2 to 3 feet below the surface. The planned pavement subgrade areas should be proofrolled with a fully-loaded on-road dump truck (minimum 20 tons) prior to the placement of structural fill and the aggregate base course (NCDOT ABC Stone) prior to paving.

The contractor should exercise care to protect prepared compacted fill and prepared subgrade during site and construction operations, especially prior to and during wet weather conditions. The use of smooth drum rollers, large-tired construction equipment or other means to seal off the surface materials is recommended to prevent wetting and softening. Additionally, areas to receive structural fill should be proofrolled prior to the commencement of filling operations daily.

**We recommend that the budget include a contingency for removal and replacement of unsuitable materials with structural fill. Additionally, the contractor should provide unit rates for this service, including unit rates for removal of rock for both trench and mass excavations.**



### **Foundation Recommendations**

After site preparation and site grading have been completed, it is our opinion that the planned construction may be supported on conventional shallow foundations. We anticipate that a design allowable soil bearing pressure of 4,000 pounds per square foot (psf) is recommended. The design bearing pressure is contingent on the foundations bearing in natural, undisturbed dense residual materials or on new structural fill. Structural fill should conform to the recommendations contained in the **Structural Fill** section of this report.

Assuming that the site grading and structural fill are constructed in conformance with the requirements of this report, we anticipate that total foundation settlement of approximately 1 inch and differential settlement of approximately ½ that value may be encountered over time. We understand that the estimated settlements indicated are acceptable to the project structural engineer.

It should be noted that the performance of structural fill is highly dependent upon proper site grading techniques, type of structural fill, compacted lift thickness and degree of compaction. We have provided detailed recommendations related to these items in this report. Given the relatively deep structural fill thickness required for this site, we recommend that a representative of Southern Engineering be present on a full-time basis during site grading and structural fill placement to perform construction observation and testing services. It is important that the Geotechnical Engineer be present on site to confirm that the geotechnical design intent has been met during construction.

Additionally, we recommend that a reduced allowable bearing capacity of 2,000 psf be used for the design of foundations for the Filter Building due to the presence of existing fill encountered in the soil test borings. Foundation undercut and replacement with lean concrete or compacted well graded gravel (NCDOT ABC stone) may be required in the existing fill.

We recommend a minimum width of 24 inches for wall footings to prevent general bearing capacity failure in isolated weak bearing soils. Also, footings should bear at a minimum depth of 24 inches below the prevailing exterior ground surface elevation to minimize the potential damage due to frost heave.

Foundation bearing surface evaluations should be performed in each foundation excavation prior to placement of reinforcing steel. These evaluations should be performed by a representative of the Geotechnical Engineer to confirm that the design allowable soil bearing pressure is available. The foundation bearing surface evaluations should be performed using a combination of visual observation and dynamic cone penetrometer testing.

Exposure to the environment can weaken the foundation subgrade, if they are exposed for extended periods of time. If the foundation bearing surface becomes unstable due to exposure to the environment, remedial work, such as removal of unsuitable soils, may need to be performed prior to concrete placement. We recommend that the use of a lean concrete mud mat within the footing excavation when concrete placement will not occur on the same day as excavation

### **Concrete Slabs-On-Grade**

We recommend that a design modulus of subgrade reaction value of 100 pci be used for concrete slabs-on-grade. This recommended value assumes that the site preparation is done in accordance with the recommendations of this report and the upper 12 inches of subgrade soils are compacted to a minimum of 100 percent of their standard Proctor (ASTM D-698) maximum dry density.

We recommend that slab-on-grade construction be underlain by a minimum 4-inch thick layer of open graded stone. The use of No. 57 open graded crushed stone meeting the AASHTO specifications is suggested. IBC 2009 building code requires damp-proofing the slab by placing a membrane of 6-mil polyethylene with joints lapped not less than 6 inches beneath ground slabs. Joints in the membrane should be lapped and sealed in accordance with the manufacturer's installation instructions. We believe, along with American Concrete Institute, that a 10-mil polyethylene vapor retarder has better survivability during installation and that the cost difference between 6 and 10 mil is insignificant. We recommend that the use of a 10 mil vapor retarder be considered for this project.

Construction activities and exposure to the environment often cause deterioration of the prepared slab-on-grade subgrade. Therefore, we recommend that the subgrade soils be evaluated by a representative of the Geotechnical Engineer immediately prior to floor slab construction. This evaluation may include a combination of visual observations, proofroll observations, and field density tests to verify that the subgrade has been properly prepared. If soft or loose areas are encountered, recommendations for remedial measures should be provided by the Geotechnical Engineer.

### **Seismic Site Class**

Based upon the guidelines presented in the International Building Code (IBC 2009) and the average properties of the soils encountered in the soil test pits, the site class most applicable to the site is Site Class D. Site Class D is identified as a stiff soil profile with the following average soil properties:

1. Shear wave velocity between 600 and 1,200 feet per second.
2. Standard penetration resistance greater than 15 blows per foot, but less than 50 blows per foot.
3. Soil undrained shear strength greater than 1,000 pounds per square foot, but less than 2,000 pounds per square foot.

Our evaluation utilized average standard penetration resistance test value available from the field exploration operations and our experience. We anticipate that a less conservative site class can be determined with in-situ shear wave velocity analysis. We are available to provide this service if desired.

## **Earth Pressure**

We understand that certain walls for the project may be located below the final ground surface and must therefore be designed to resist lateral earth pressure. Retaining walls which also serve as foundation walls will typically be restrained at the top of the wall and will be essentially unable to rotate under the action of earth pressure. Such walls should therefore be designed for the "at rest" stress conditions. For retaining walls which can move outward at the top and are free to rotate about its base, the active state of stress may be used for wall design. For the evaluation of the resistance of soil to lateral loads, which is frequently necessary for evaluating the stability of retaining walls, and laterally loaded foundations; the passive earth pressure must be calculated.

Most of the soils encountered in the test borings classified as silty Sand (SM). For these types of materials, we provide the following earth pressure coefficients.

Active	0.33
At Rest	0.5
Passive	3.0

It should be noted that full development of passive pressure requires deflections toward the soil mass on the order of 1.0% to 4.0% of total wall height. For analysis of sliding resistance of the base of a retaining wall, the coefficient of friction may be taken as 0.4 for the soils at the project site. The force which resists the base sliding is calculated by multiplying the normal force on the base by the coefficient of friction. Full development of the frictional force could require deflection of the base of roughly 0.1 to 0.3 inches.

The above design recommendations assume that the wall backfill will be horizontal; that the backfill will be compacted to 95 percent of standard Proctor maximum dry density; no safety factor is included; any surcharge is not considered; and wall friction is negligible.

For convenience, equivalent fluid densities are frequently used for the calculation of lateral earth pressures. For "at rest" stress conditions, an equivalent fluid density of 60 pcf may be used. For the "active" state of stress an equivalent fluid density of 40 pcf may be used. These equivalent fluid densities are based on the assumptions that drainage behind the retaining wall will allow *no* development of hydrostatic pressure; that native sandy silts or silty sands will be used as backfill; that the backfill soils will be compacted to 95 percent of standard Proctor maximum dry density; that backfill will be horizontal; and that no surcharge loads will be applied. We have included a depictive diagram in the Appendix.

## **Structural Fill**

In order to achieve high-density structural fill, the following recommendations are offered:

- (1) Materials selected for use as structural fill should be free of organic matter, waste construction debris, and other deleterious materials. The material should not contain rocks having a diameter over 3 inches. It is our opinion that the following soils represented by their USCS group symbols will typically be suitable for use as structural fill and are abundant in the Piedmont Physiographic region: (SM), (SW), (SP), (SP-SM) and well-graded gravels (GW). Materials selected for use as structural fill should not contain more than 35 percent passing a US Standard No. 200 sieve. Additionally, the soil fines should be non-plastic. The following soil types should be considered unsuitable for approved off-site borrow: (SP-SC), (SC), (ML), (MH), (CL), (CH), (OL), (OH), and (Pt).
- (2) We anticipate that some the on-site soils classified as SM will likely be suitable for re-use as structural fill and for use as backfill for retaining walls. Blending of on-site materials may be required to meet the requirements for structural fill. Additionally, we anticipate that cobbles and boulders may be reduced by manipulation and crushing with heavy steel tracked equipment and with heavy pad-foot or stud-foot compactors, such as the Caterpillar 825.
- (3) Laboratory Proctor compaction tests and classification tests should be performed on representative samples obtained from the proposed borrow material to provide data necessary to determine acceptability and for quality control. The moisture content of suitable borrow soils should generally not be more than 3 percentage points above or more than 3 percentage points below optimum at the time of compaction. More stringent moisture limits may be necessary with certain soils.
- (4) Suitable fill material should be placed in thin lifts (lift thickness depends on type of compaction equipment, but in general, lifts of 8-inch maximum loose measurement are recommended). The soil should be compacted by mechanical means such as heavy (approximately 40 tons) pad-foot or stud-foot compactors, such as the Caterpillar 825, heavy vibrating sheep's foot and/or a smooth drummed vibratory roller. Within small excavations such as behind retaining walls or in footing excavations, we recommend the use of gasoline powered tamps or diesel sled tamps to achieve the specified compaction. Loose lift thickness of 4 to 6 inches is recommended in small or confined area fills.
- (5) We recommend that all structural fill be compacted to a minimum of 98 percent of the modified Proctor maximum dry density in accordance with ASTM D1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>). Structural fill deeper than 10 feet should be compacted to at least 100 percent of ASTM D-1557. Pavements and driveways should be constructed in accordance with NCDOT requirements.
- (6) Backfill materials for retaining walls should meet the requirements for structural fill. Backfill for retaining walls should be compacted to 95 percent of the standard Proctor maximum dry density in accordance with ASTM D698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>).
- (7) An experienced soil engineering technician representing the *SOUTHERN ENGINEERING* should take adequate density tests on a full-time basis throughout the fill placement operation to verify that the specified degree of compaction is achieved. It is particularly important that this be accomplished during the initial stages of the compaction operation to enable adjustments to the compaction operation, if necessary.

### **Reuse of On-site Materials for Structural Fill**

We anticipate that much of the existing fill and residual materials encountered in the soil test borings can be reused as structural fill, provided it meets the requirements presented in the **Structural Fill** section of this report. We anticipate that moisture conditioning, such as scarifying and drying may be required to facilitate efficient earthwork operations. Additionally, mixing and blending of on-site materials and off-site borrow may be required to meet the requirements for structural fill contained in this report.

Partially weathered rock and sand may produce cobbles, flagstone and boulders, which would be considered unsuitable for use as structure fill for this project. We anticipate that the larger materials may be reduced to meet the requirements for structural fill with the use of heavy tracked equipment, a Caterpillar 825 Compactor, or with a rock crusher. These materials should be blended with soil to produce well-graded gravel for structural fill.

### **Excavation Characteristics**

For the purposes of discussing excavation characteristics; the materials found in the test borings may be placed into three broad categories: existing fill and residual soils, partially weathered rock, and bedrock.

We anticipate that most of the existing fill materials and residual soils at the project site should generally be excavated with conventional soil excavation equipment, such as backhoes, crawler excavators, scrapers, and loaders. However, residual soils having penetration resistances ranging from 50 to 100 blows per foot may prove to be difficult to excavate. These hard soils may require the use of heavy dozers or heavy crawler excavators equipped with rock teeth to effectively achieve excavation. It is possible that hard soils may require ripping in some instances.

Although materials identified as partially weathered rock may in some cases be excavated with conventional soil excavation equipment, we believe that it is prudent to assume that partially weathered rock will require ripping to efficiently achieve excavation. Additionally, it would not be unusual to encounter partially weathered rock within more weathered residual soils, including boulders. Ripping can probably best be achieved with a single-tooth ripper mounted on a large dozer-tractor such as a Caterpillar D-8 or larger. In small area excavations, such as footings and trenches, excavation of partially weathered rock may require the use of heavy crawler excavators (operating weight greater than 80,000 pounds) equipped with pneumatic jackhammers.

The term rock, as used in this report, refers to material that would prevent further advancement of the test boring using conventional soil drilling techniques. The depth at which this occurs is known as "auger refusal". For preliminary planning purposes, it may be prudent to assume that drilling and blasting will be required to remove materials identified as rock.

It is important to note that the depth to rock or partially weathered rock may vary quite rapidly over relatively short distances. It would not be unusual for rock or partially weathered rock to occur at higher elevations between or around the soil test borings.

### **Excavation Considerations**

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state, and federal safety regulations including the current North Carolina and OSHA Excavation and Trench Safety Standards. Construction site safety is the sole responsibility of the contractor for the means, methods, and sequencing of construction operations.

We are providing this information solely as a service to our client. Under no circumstances should the information provided herein be interpreted to mean that *SOUTHERN ENGINEERING* is assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. Specifically, the current OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926 and North Carolina requirements should be followed. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. If an excavation, including a trench, is extended to a depth of more than twenty (20) feet, it will be necessary to have the side slopes designed by a professional engineer registered in the State of North Carolina.

Materials removed from the excavation should not be stockpiled immediately adjacent to the excavation, since the load may cause a sudden collapse of the embankment. Slope stability analysis should be performed to determine the factor of safety for cut or fill slopes.

The contractor's "responsible person" should establish a minimum lateral distance from the crest of the slope for all vehicles and spoil piles. Likewise, the contractor's "responsible person" should establish protective measures for exposed slope faces.

### **Temporary Construction Excavations**

Temporary construction slopes should be designed in strict compliance with the most recent OSHA regulations. The test borings indicate that most soils at the site are Type B as defined in the *Federal Register, Vol. 54, No. 209, October 31, 1989*. This dictates that temporary construction slopes in residual soils be no steeper than 1 horizontal to 1 vertical for excavation depths of up to 20 feet. Temporary construction slopes should be closely observed for signs of mass movement, tension cracks near the crest, bulging at the toe of the slope, etc. If potential stability problems are observed, the geotechnical engineer should be immediately contacted. The responsibility for excavation safety and stability of construction slopes should lie solely with the contractor.

We recommend that permanent cut or fill slopes be no steeper than 2.5 (H) to 1.0 (V) to maintain long term stability and to provide ease of maintenance. Slopes constructed steeper than 2.5 (H) to 1.0 (V) could be highly susceptible to erosion, will be difficult to maintain, and could experience large scale slope failure in some instances. Therefore, permanent slopes of 3.0 (H) to 1.0 (V) or flatter are generally preferred. The crest or toe of cut or fill slopes should be no closer than 15 feet to any building foundation. The crest or toe should be no closer than 5 feet to the edge of any pavements.

## **Dewatering**

Our past experience indicates that compacted fill and foundation bearing soils will likely soften when exposed to free water. The contractor should facilitate site drainage and construction operations to prevent softening of prepared subgrade.

Control and lowering of groundwater may be required if encountered. We anticipate that a gravity drainage system using open trenches or installed trench drains may be required for this project. Under-drains, finger-drains and blanket drains should be backfilled with open graded crushed stone (AASHTO #57) surrounded by a properly graded filter medium (T.C. Mirafi 140N or equivalent). The purpose of the non-woven geotextile is to provide a filter bridge between structural fill and the AASHTO #57 stone. A typical trench drain detail is attached in the Appendix.

Pumping from sump pits should be done with care to prevent the loss of fines, development of soil boils, or instability of slopes. We must emphasize that dewatering requirements will be dictated by ground water conditions at the time of construction and may require more aggressive dewatering techniques. The contractor should use a technique or combination of techniques which achieves the desired result under actual field conditions.

## **Pavement Considerations**

The following comments are basic considerations which will not eliminate the need for a careful review, analysis, and laboratory testing. No specific analysis has been made for the design of pavements. In designing flexible pavements for parking lots or roadways, the existing subgrade conditions must be considered together with the expected traffic use and loading conditions. The conditions that will influence the design can be summarized as follows:

1. Bearing values of the subgrade can be represented by a California Bearing Ratio (CBR) for the design of flexible pavements or a Modulus of Subgrade Reaction (k) for rigid pavement structures.
2. Groundwater conditions, variations in water levels, expansive considerations, and the necessity for underdrains
3. Vehicular traffic, in terms of the number and frequency of vehicles and their range of axle loads.
4. Probable increase in vehicular use over the life of the pavement.
5. The availability of suitable materials to be used in the construction of the pavement and their relative costs.

Generally, flexible pavements derive their strength from:

1. The existing subgrade soils.
2. Any additional compacted fill soils.
3. Stabilization of the subgrade.
4. The base course.
5. The asphaltic concrete.

The strength of granular soils may be increased by proof compacting or by stabilization with cement, whereas the stability of clay subgrades may be increased by various methods including soil compaction and lime stabilization. Subgrades of higher strength generally require less pavement thickness. Based on the results of the soil test borings performed in the building area, we anticipate that the subgrade soils within the proposed pavement areas to consist primarily of silty Sand (USCS SM). The California Bearing Ratio (CBR) for these soils may reasonably range from approximately 5 to 7, if the subgrade soils are uniformly compacted in accordance with NCDOT requirements. We are available to provide laboratory performed CBR tests to determine the actual CBR values, if desired.

## RECOMMENDED QUALITY CONTROL SERVICES

Additional foundation engineering, testing, and consulting services recommended for this project are summarized below:

- (1) Proofrolling Observation: Proofrolling should be performed by *SOUTHERN ENGINEERING* at the site prior to the placement of additional fill to determine if remedial measures are necessary.
- (2) Compaction Testing: It is recommended that structural backfill for the foundation walls and any below slab backfill be observed and tested by *SOUTHERN ENGINEERING*. The purpose of these evaluations will be to verify that backfill is placed and compacted in accordance with the recommendations of this report.
- (3) Footing and Floor Slab Evaluations: It is recommended that footing and slab areas for this project be evaluated by *SOUTHERN ENGINEERING*. The purpose of these evaluations will be to verify that the design soil bearing pressure is available and that subgrade areas are properly prepared.
- (4) Reinforcing Steel Observations: It is recommended that we observed reinforcing steel placed for footings, foundation walls and floor slabs for this project. The purpose of these evaluations will be to verify conformance with the structural plans.
- (5) Concrete Quality Control Testing: It is recommended that Portland cement concrete placed for foundations and foundation walls, and slab on grade for this project be tested by *SOUTHERN ENGINEERING*. The purpose of these evaluations will be to verify that the 28-day design compressive strength is available.

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The recommendations conveyed in this report have been based upon information derived from limited sampling and testing. Accordingly, the recommendations' appropriateness cannot be evaluated until *SOUTHERN ENGINEERING* learns more about actual subsurface conditions by observing earthwork in the field, at which time *SOUTHERN ENGINEERING* will finalize its recommendations. It is in the best interest of the Client to retain *SOUTHERN ENGINEERING* to observe earthwork operations with respect to the contractor's compliance with design concepts, specifications, and recommendations, and to help develop alternative recommendations if the conditions observed differ from those inferred to exist.

No entity can be as familiar with the design concepts inherent in these recommendations as *SOUTHERN ENGINEERING*. Accordingly, only observations by *SOUTHERN ENGINEERING* can permit *SOUTHERN ENGINEERING* to finalize its recommendations and enhance the likelihood of the design concept being adequately considered during implementation of its recommendations.

*SOUTHERN ENGINEERING* appreciates the opportunity to work with you during the design phase of this project. We are prepared to provide the recommended construction materials testing and special inspection services during the construction phase.



APPENDIX

# Important Information about This

# Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

**The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.**

## Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

## Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

## You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

## This Report May Not Be Reliable

*Do not rely on this report* if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

## Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

## This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

## This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

## Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

## Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

## Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

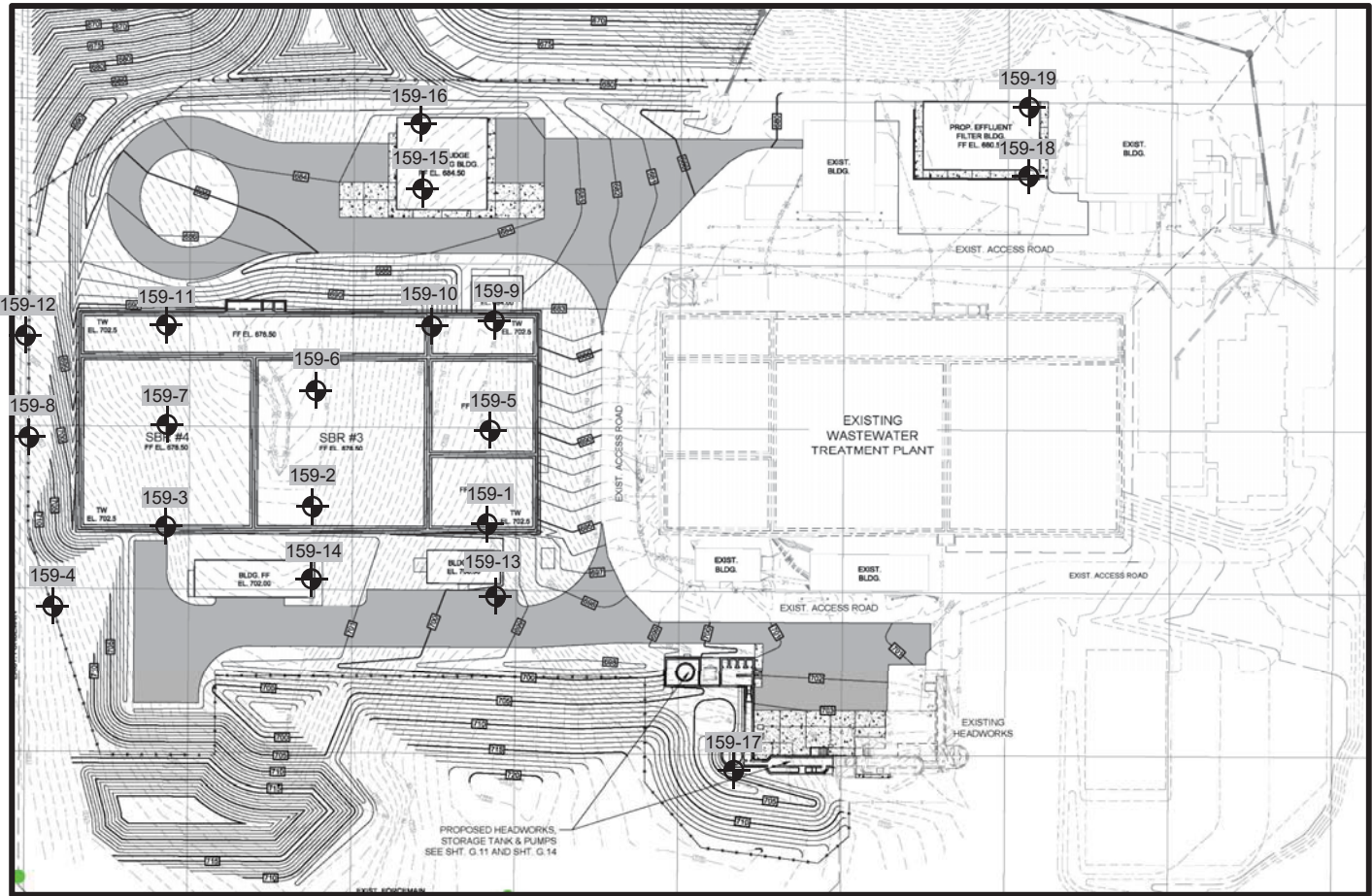
## Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



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e-mail: [info@geoprofessional.org](mailto:info@geoprofessional.org) [www.geoprofessional.org](http://www.geoprofessional.org)



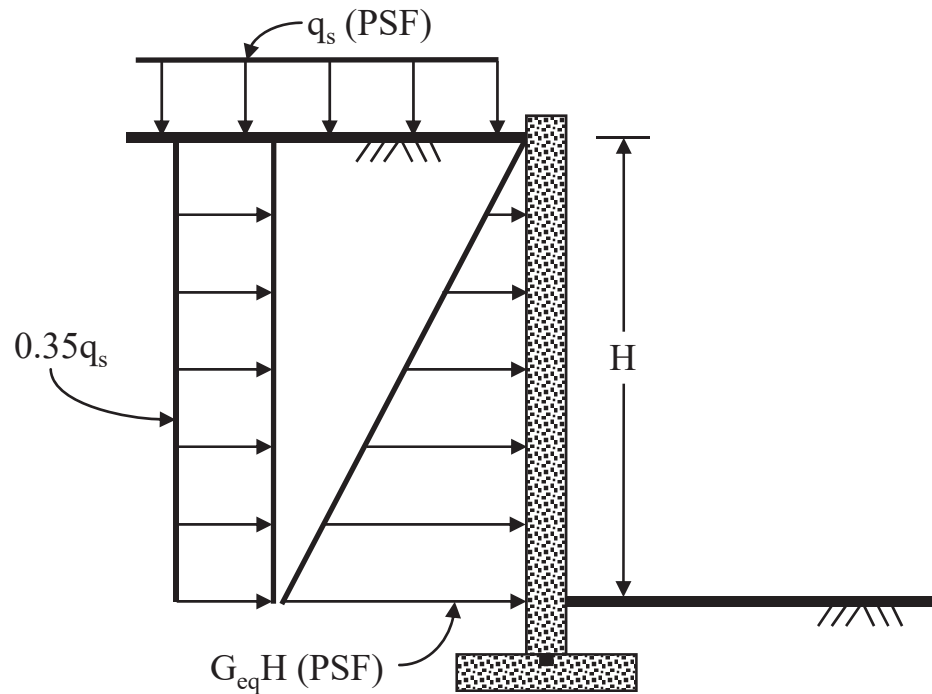
Plan adapted from W.K. Dickson

<b>SOUTHERN ENGINEERING</b> Consulting • Engineering • Construction Testing • Special Inspections 6120 Brookshire Blvd, Suite A Charlotte, NC 28216 (704) 557-0070	REVISIONS
	9/29/2018

LEGEND	
	-Approx. Soil Boring Location

<b>KILLIAN CREEK WWTB BORING TEST LOCATION PLAN</b>			
LINCOLN COUNTY, NC			April 13, 2018
REF		Not Drawn To Scale	Project No.: 18-159

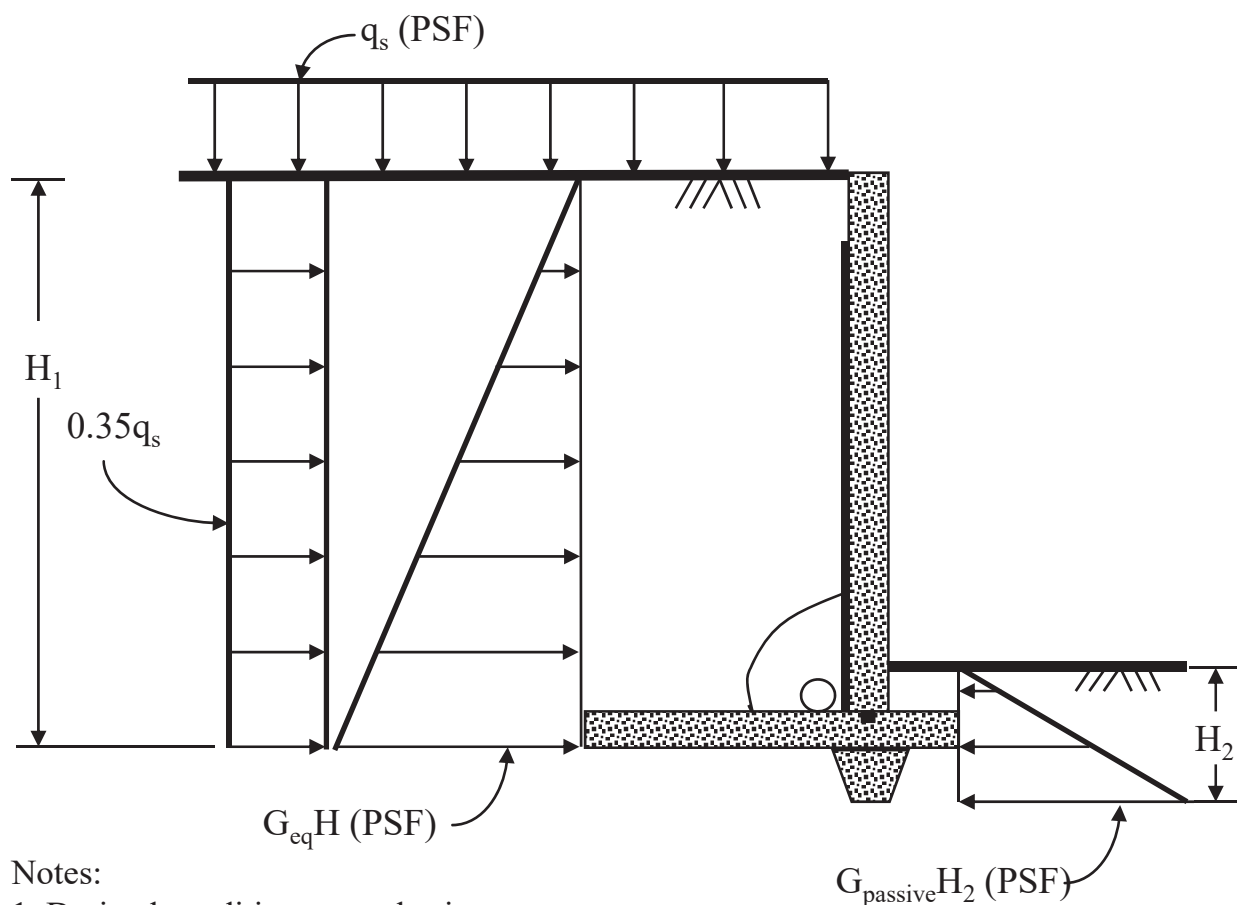
## EARTH PRESSURE DIAGRAM BELOW GRADE WALLS



### Notes:

1. Drained condition, non-plastic, coarse backfill (SM, SP, SW, GM, GP, GM).
2.  $G_{eq}$  = Equivalent Fluid Pressure, see report.
3. Active state: wall is free to move at top.
4. At-Rest state: wall cannot move due to restraint.

## EARTH PRESSURE DIAGRAM CANTILEVERED RETAINING WALLS

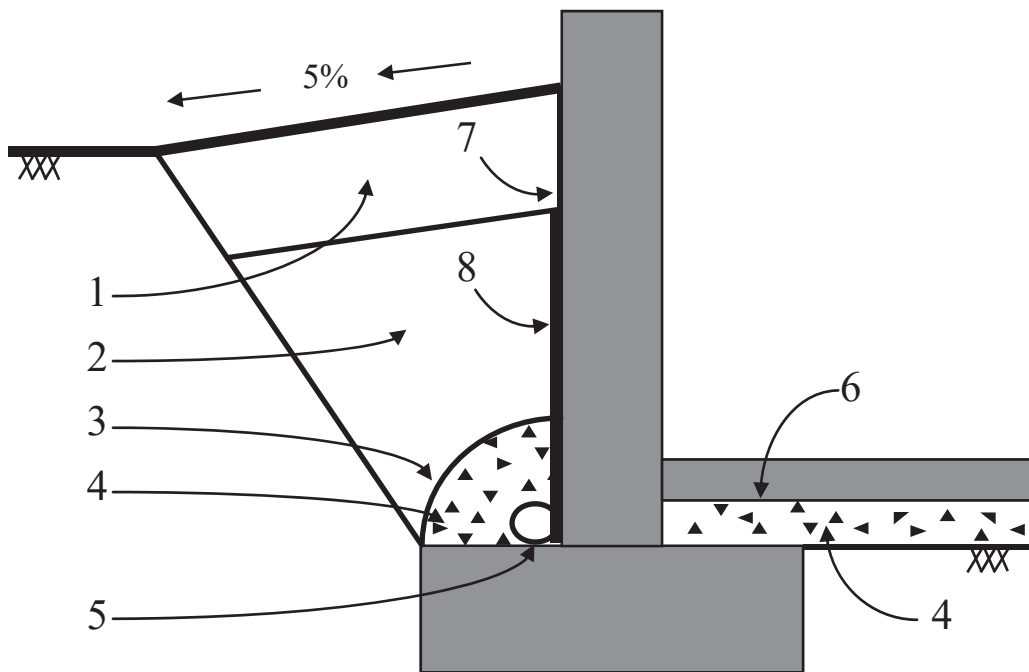


### Notes:

1. Drained condition, non-plastic, coarse backfill per Structural Fill section of the geotechnical report.
2.  $G_{eq}$  = Equivalent Fluid Pressure, see report.
3. Active state: wall is free to move at top.
4. At-Rest state: wall cannot move due to restraint.

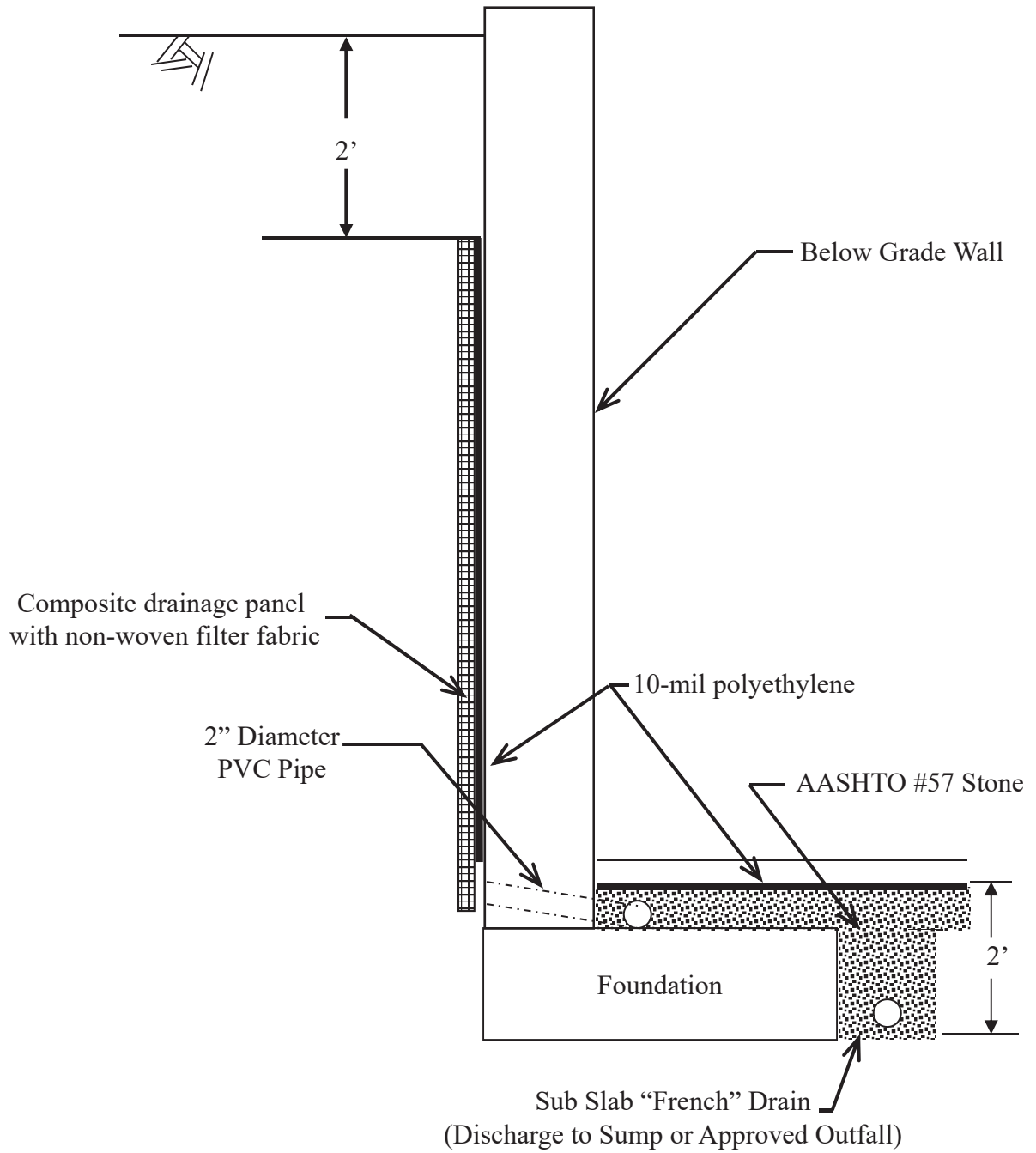
NOT TO SCALE

## FOUNDATION DRAIN DETAIL (Not to Scale)



### Notes

1. Impermeable clay cap, one foot thick.
2. Coarse graded drainage material, SM or more permeable.
3. Filter fabric, Mirafi 140N or equal.
4. Open graded stone, AASHTO #57 or equal, six inch min thickness around pipe, four inches below slab.
5. Slotted HDPE or PVC pipe, slots down, drain to daylight or approved outfall.
6. Minimum 6-mil polyethelene.
7. Minimum 10-mil polyethelene or waterproofed membrane
8. Composite drain (Mira-Drain or equal)



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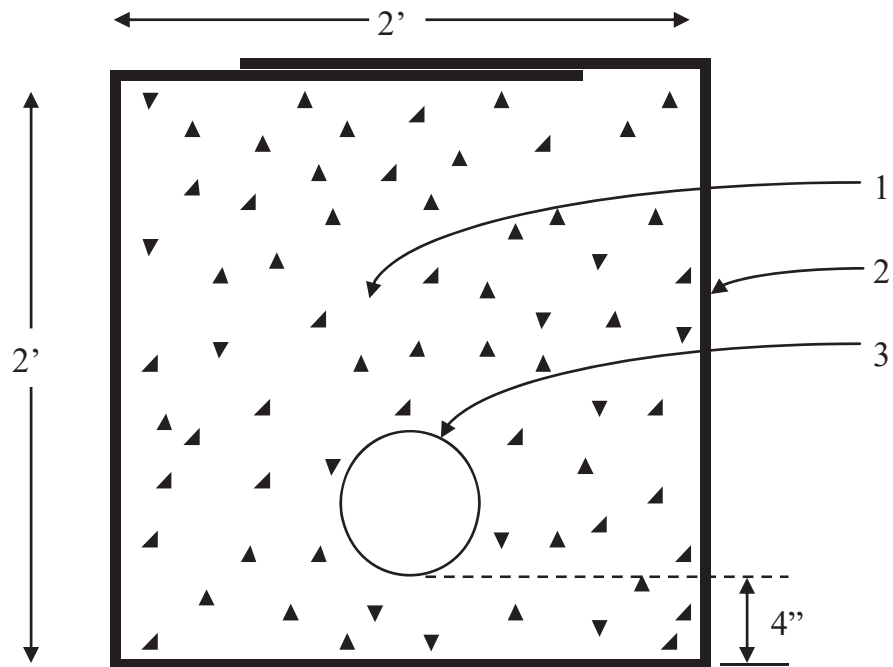
REVISIONS

**Foundation Wall Drain Detail**

SFC	Not Drawn To Scale	11/2016
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## TRENCH DRAIN DETAIL



### Notes:

1. Open graded stone, AASHTO #57 or equal.
2. Geotextile, T.C. Mirafi 140N or equal.
3. 4" diameter perforated HDPE or PVC pipe, slots placed down.
4. When pipe leaves trench drain envelope, use non-perforated pipe.

# FIELD CLASSIFICATION SYSTEM FOR SOILS

## NON-COHESIVE SOILS

(Silt, Sand, Gravel and Combinations)

<u>Density</u>	<u>Blows per Foot</u>	<u>Particle Size Identification</u>	
Very Loose	- 4 or less	Boulders	- > 10 inches
Loose	- 4 to 10	Cobbles	- 3 to 10 inches
Medium Dense	- 10 to 30	Gravel	- Coarse: $\frac{3}{4}$ to 3 in Fine: $\frac{3}{4}$ in to 4.75 mm
Dense	- 30 to 50	Sand	- Coarse: 4.75 to 2 mm Medium: 2 to 425- $\mu$ m Fine: 475 to 75- $\mu$ m
Very Dense	- 50 or more		Silt & Clay

## COHESIVE SOILS

(Clay, Silt, and Combinations)

<u>Consistency</u>	<u>Blows per Foot</u>	<u>Plasticity</u>	
Very Soft	- 2 or less	<u>Degree</u>	<u>PI</u>
Soft	- 2 to 4	None to Slight	0 to 4
Medium Stiff	- 4 to 8	Slight	5 to 7
Stiff	- 8 to 15	Medium	8 to 22
Very Stiff	- 15 to 30	High	22 and over
Hard	- 30 or more		

Classification on records of subsurface exploration are made by visual inspection of samples.

Standard Penetration Test - A 2" O.D. (1 3/8" I.D.) sampler is driven a distance of one foot into undisturbed soil with a 140 pound hammer free falling 30 inches. **Southern Engineering** will customarily drive the spoon six inches to seat into undisturbed soil prior to performing the test. The number of times the sampler is struck with the hammer is recorded for each six inches of penetration on the drill log; e.g., 4-6-3. The 'N' value can be calculated by adding the last two numbers; e.g., 6+3=9. The procedure for the standard penetration test is defined in ASTM D1586-08.

Groundwater - The groundwater level is recorded during and after the drilling operations and recorded on the drill log at the time indicated. The actual groundwater level may fluctuate due to weather conditions, site topography, adjacent construction or changed land use. Multiple groundwater levels exist; the groundwater level indicated on the log may be a perched condition

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**SOUTHERN ENGINEERING AND TESTING, P.C.**

6120-A Brookshire Boulevard, Charlotte, NC 28216

(704) 557-0070 Office • (828) 468-8300 Office 2 • (704) 910-3516 Fax

# KEY TO SYMBOLS

**SOUTHERN ENGINEERING**  
Consulting • Engineering • Construction Testing • Special Inspections

Southern Engineering and Testing, P.C.  
6120-A Brookshire Boulevard  
Charlotte, NC 28216

CLIENT Lincoln County

PROJECT NAME Killian Creek WWTP

PROJECT NUMBER 18-159

PROJECT LOCATION Lincoln County, North Carolina

## LITHOLOGIC SYMBOLS (Unified Soil Classification System)



GM: USCS Silty Gravel



ML: USCS Silt



PWR: Partially Weathered Rock



SM: USCS Silty Sand



TOPSOIL: Topsoil

## SAMPLER SYMBOLS



Split Spoon

## WELL CONSTRUCTION SYMBOLS

## ABBREVIATIONS

LL - LIQUID LIMIT (%)  
PI - PLASTIC INDEX (%)  
W - MOISTURE CONTENT (%)  
DD - DRY DENSITY (PCF)  
NP - NON PLASTIC  
-200 - PERCENT PASSING NO. 200 SIEVE  
PP - POCKET PENETROMETER (TSF)

TV - TORVANE  
PID - PHOTOIONIZATION DETECTOR  
UC - UNCONFINED COMPRESSION  
ppm - PARTS PER MILLION  
▽ - Water Level at Time  
Drilling, or as Shown  
▼ - Water Level at End of  
Drilling, or as Shown  
▽ - Water Level After 24  
Hours, or as Shown

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/22/18 **COMPLETED** 3/22/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								□ FINES CONTENT (%) □		
0.0		(OL) TOPSOIL (Approximately 4 inches)								
		(SM) Tan white, moist, micaceous, silty SAND (SM) (RESIDUUM) with rock fragments								
2.5		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 1	89	5-8-50 (58)					
			SS 2	167	50/3"					
5.0			SS 3	100	50/2"					
7.5			SS 4	233	50/3"					
10.0			SS 5	200	50/4"					
12.5										
15.0										

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

(Continued Next Page)

**CLIENT** Lincoln County **PROJECT NAME** Killian Creek WWTP  
**PROJECT NUMBER** 18-159 **PROJECT LOCATION** Lincoln County, North Carolina

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
								PL	MC LL
								20 40 60 80	20 40 60 80
								□ FINES CONTENT (%) □	
								20 40 60 80	20 40 60 80
17.5		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND (continued)	SS 6	67	50/3"			●	>>▲
20.0		Refusal at 20.0 feet. Bottom of borehole at 20.0 feet.							

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 4/3/18 **COMPLETED** 4/3/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 4 inches)									
		(ML) Tan, moist, micaceous, clayey SILT (ML) (RESIDUUM)									
2.5			SS 1	94	4-5-7 (12)						
		(SM) Tan and orange, moist, micaceous, silty SAND (SM)									
5.0			SS 2	72	10-19-25 (44)						
7.5			SS 3	56	26-36-35 (71)						
		(SM) Tan black, moist, micaceous, silty SAND (SM) with rock fragments									
10.0			SS 4	67	15-19-24 (43)						
12.5			SS 5	67	15-17-16 (33)						
15.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND									

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(Continued Next Page)

**CLIENT** Lincoln County **PROJECT NAME** Killian Creek WWTP  
**PROJECT NUMBER** 18-159 **PROJECT LOCATION** Lincoln County, North Carolina

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL      MC      LL 20    40    60    80			
								□ FINES CONTENT (%) □ 20    40    60    80			
17.5		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND (continued)									
20.0			SS 6	94	24-48-50/5"						
22.5											
25.0			SS 7	122	32-50/3"						

Bottom of borehole at 25.0 feet.

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/26/18 **COMPLETED** 3/26/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 5 inches)									
2.5		(ML) Brown orange, moist, micaceous, sandy SILT (ML) (RESIDUUM)	SS 1	83	5-7-9 (16)						
5.0		(SM) Orange tan, moist, micaceous, silty SAND (SM)	SS 2	78	14-13-14 (27)						
7.5		(SM) Tan, moist, micaceous, silty SAND (SM) with rock fragments	SS 3	100	7-12-17 (29)						
10.0		(SM) Tan, moist, micaceous, silty SAND (SM) with rock fragments	SS 4	78	20-18-24 (42)						
12.5		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 5	120	50/5"						
15.0		Bottom of borehole at 15.0 feet.									

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**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 4/3/18 **COMPLETED** 4/3/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								20 40 60 80 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80		
0.0		(OL) TOPSOIL (Approximately 5 inches)								
		(ML) Tan, moist, micaceous, sandy SILT (ML) (RESIDUUM)								
2.5			SS 1	78	8-8-8 (16)					
5.0		(SM) Tan, moist, micaceous, silty SAND (SM)	SS 2	100	6-8-11 (19)					
7.5			SS 3	78	9-12-16 (28)					
10.0			SS 4	67	13-15-14 (29)					
12.5										
		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 5	175	50/4"					
15.0										

Bottom of borehole at 15.0 feet.

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CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina  
 DATE STARTED 3/22/18 COMPLETED 3/22/18 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 6 inches  
 DRILLING CONTRACTOR SE&T GROUND WATER LEVELS:  
 DRILLING METHOD 2 1/4-in HSA AT TIME OF DRILLING ---  
 LOGGED BY WEL CHECKED BY WEL AT END OF DRILLING ---  
 NOTES \_\_\_\_\_ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								□ FINES CONTENT (%) □		
0.0		(OL) TOPSOIL (Approximately 4 inches)								
2.5		(ML) Tan brown, moist, micaceous, sandy SILT (ML) (RESIDUUM) with rock fragments	SS 1	67	3-2-5 (7)					
5.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 2	100	50/5"					
7.5			SS 3	120	50/5"					
10.0			SS 4	100	50/2"					
12.5			SS 5	400	50/1"					
15.0		Bottom of borehole at 15.0 feet.								

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CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina  
 DATE STARTED 3/17/18 COMPLETED 3/17/18 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 6 inches  
 DRILLING CONTRACTOR SE&T GROUND WATER LEVELS:  
 DRILLING METHOD 2 1/4-in HSA AT TIME OF DRILLING ---  
 LOGGED BY WEL CHECKED BY WEL AT END OF DRILLING ---  
 NOTES \_\_\_\_\_ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 5 inches)									
		(ML) Tan brown, moist, micaceous, sandy SILT (ML) (RESIDUUM)									
2.5			SS 1	100	2-4-5 (9)						
5.0		(SM) Brown, moist, micaceous, silty SAND (SM)									
			SS 2	100	5-7-9 (16)						
7.5		(SM) Brown, moist, micaceous, silty SAND (SM)									
			SS 3	89	14-21-22 (43)						
10.0		(SM) Brown white black, moist, micaceous, silty SAND (SM)									
			SS 4	83	11-16-18 (34)						
12.5											
			SS 5	100	13-20-21 (41)						
15.0											

Bottom of borehole at 15.0 feet.

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**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/26/18 **COMPLETED** 3/26/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 5 inches)									
2.5		(ML) Orange tan, moist, micaceous, sandy SILT (ML) (RESIDUUM)	SS 1	83	10-10-15 (25)						
5.0		(SM) Tan, moist, micaceous, silty SAND (SM)	SS 2	89	15-28-48 (76)						
7.5			SS 3	89	25-39-43 (82)						
10.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 4	91	29-50/5"						
12.5		(SM) Tan white, moist, micaceous, silty SAND (SM)	SS 5	94	22-26-38 (64)						
15.0		Bottom of borehole at 15.0 feet.									

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County **PROJECT NAME** Killian Creek WWTP  
**PROJECT NUMBER** 18-159 **PROJECT LOCATION** Lincoln County, North Carolina  
**DATE STARTED** 3/27/18 **COMPLETED** 3/27/18 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**DRILLING CONTRACTOR** SE&T **GROUND WATER LEVELS:**  
**DRILLING METHOD** 2 1/4-in HSA **AT TIME OF DRILLING** ---  
**LOGGED BY** WEL **CHECKED BY** WEL **AT END OF DRILLING** ---  
**NOTES** \_\_\_\_\_ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
								PL	MC LL
								20 40 60 80	20 40 60 80
0.0		(OL) TOPSOIL (Approximately 12 inches)							
2.5		(ML) Orange brown, moist to wet, micaceous, sandy SILT (ML) (RESIDUUM)	SS 1	89	7-10-16 (26)				
5.0		(SM) Orange brown white, wet, micaceous, silty SAND (SM)	SS 2	94	13-21-29 (50)				
7.5			SS 3	94	17-24-35 (59)				
10.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 4	160	50/5"				>>
12.5			SS 5	120	50/5"				>>
15.0									

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/22/18 **COMPLETED** 3/22/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								20 40 60 80 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80		
0.0		(OL) TOPSOIL (Approximately 4 inches)								
2.5		(ML) Brown, moist, micaceous, sandy SILT (ML) (RESIDUUM) with rock fragments	SS 1	39	4-5-4 (9)					
5.0		(SM) Tan orange black, moist, micaceous, silty SAND (SM)	SS 2	72	7-10-9 (19)					
7.5		(SM) Tan white, moist, micaceous, silty SAND (SM) with rock fragments	SS 3	39	11-11-14 (25)					
10.0			SS 4	67	10-12-14 (26)					
12.5										
15.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 5	140	50/5"					>>

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/22/18 **COMPLETED** 3/22/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 5 inches)									
		(ML) Tan brown, moist, micaceous, sandy SILT (ML) (RESIDUUM)									
2.5			SS 1	100	8-15-24 (39)						
		(SM) Tan brown white, moist, micaceous, silty SAND (SM)									
5.0			SS 2	56	31-38-47 (85)						
		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND									
7.5			SS 3	300	50/2"					>>	
10.0			SS 4	120	50/5"					>>	
12.5											
15.0			SS 5	120	50/5"					>>	

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/19/18 **COMPLETED** 3/19/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								□ FINES CONTENT (%) □		
0.0		(OL) TOPSOIL (Approximately 5 inches)								
		(ML) Orange brown, moist, sandy SILT (ML) (RESIDUUM)	SS 1	100	5-7-8 (15)					
2.5										
		(ML) Orange brown black, moist, sandy SILT (ML)	SS 2	100	6-10-13 (23)					
5.0										
		(SM) Tan white, moist, micaceous, silty SAND (SM)	SS 3	56	8-11-13 (24)					
7.5										
			SS 4	72	12-22-37 (59)					
10.0										
		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 5	133	50/3"					
12.5										
15.0										

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ



CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina  
 DATE STARTED 3/27/18 COMPLETED 3/27/18 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 6 inches  
 DRILLING CONTRACTOR SE&T GROUND WATER LEVELS:  
 DRILLING METHOD 2 1/4-in HSA AT TIME OF DRILLING ---  
 LOGGED BY WEL CHECKED BY WEL AT END OF DRILLING ---  
 NOTES \_\_\_\_\_ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								□ FINES CONTENT (%) □		
0.0		(OL) TOPSOIL (Approximately 4 inches)								
2.5		(ML) Orange brown, moist, micaceous, sandy SILT (ML) (RESIDUUM) with rock fragments	SS 1	100	7-21-19 (40)					
5.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 2	91	29-50/5"					
7.5		(SM) Tan and brown, moist, micaceous, silty SAND (SM) with rock fragments	SS 3	89	18-24-27 (51)					
10.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 4	83	25-27-40 (67)					
12.0		Refusal at 12.0 feet. Bottom of borehole at 12.0 feet.	SS 5		50/0"					

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CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina  
 DATE STARTED 3/23/18 COMPLETED 3/23/18 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 6 inches  
 DRILLING CONTRACTOR SE&T GROUND WATER LEVELS:  
 DRILLING METHOD 2 1/4-in HSA AT TIME OF DRILLING ---  
 LOGGED BY WEL CHECKED BY WEL AT END OF DRILLING ---  
 NOTES \_\_\_\_\_ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								□ FINES CONTENT (%) □		
0.0		(OL) TOPSOIL (Approximately 5 inches)								
		(ML) Brown, moist, micaceous, sandy SILT (ML) (RESIDUUM)								
2.5			SS 1	78	7-4-5 (9)					
		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND								
5.0			SS 2	100	43-50/4"					
			SS 3	133	50/3"					
7.5			SS 4	167	50/3"					
10.0			SS 5	150	50/2"					
12.5										
15.0										

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County **PROJECT NAME** Killian Creek WWTP  
**PROJECT NUMBER** 18-159 **PROJECT LOCATION** Lincoln County, North Carolina

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
								PL	MC LL
								20 40 60 80	20 40 60 80
								□ FINES CONTENT (%) □	
								20 40 60 80	20 40 60 80
17.5		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND (continued)	SS 6	150	50/2"			●	>>▲
20.0		Refusal at 20.0 feet. Bottom of borehole at 20.0 feet.						●	

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/17/18 **COMPLETED** 3/17/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 6 inches)									
0.0 - 2.5		(ML) Brown, wet, micaceous, sandy SILT (ML) (RESIDUUM)									
2.5		(SM) Tan, moist, micaceous, silty SAND (SM)	SS 1	94	1-2-3 (5)						
2.5 - 5.0		(SM) Tan white black, moist, micaceous, silty SAND (SM) with rock fragements	SS 2	94	5-11-12 (23)						
5.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 3	94	20-42-50/5"						
5.0 - 7.5			SS 4	109	13-50/5"						
7.5			SS 5	100	50/2"						
10.0											
12.5											
15.0											

Refusal at 15.0 feet.  
 Bottom of borehole at 15.0 feet.

CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina  
 DATE STARTED 3/19/18 COMPLETED 3/19/18 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 6 inches  
 DRILLING CONTRACTOR SE&T GROUND WATER LEVELS:  
 DRILLING METHOD 2 1/4-in HSA AT TIME OF DRILLING ---  
 LOGGED BY WEL CHECKED BY WEL AT END OF DRILLING ---  
 NOTES \_\_\_\_\_ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
0.0		(OL) TOPSOIL (Approximately 4 inches)						20	40	60	80
		(ML) Brown red, moist, micaceous, sandy SILT (ML) (RESIDUUM)						20	40	60	80
2.5			SS 1	83	4-6-6 (12)						
		(ML) Orange brown, moist, micaceous, sandy SILT (ML)									
5.0			SS 2	89	5-11-15 (26)						
7.5			SS 3	28	7-9-11 (20)						
		(SM) Tan white, moist, micaceous, silty SAND (SM) with rock fragments									
10.0			SS 4	50	11-15-21 (36)						
12.5											
			SS 5	39	10-18-18 (36)						
15.0											

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 3/19/18 **COMPLETED** 3/19/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/12/18 13:15 - G:\PROJECTS\18-159.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0.0		(OL) TOPSOIL (Approximately 6 inches)									
2.5		(ML) Red, moist, micaceous, silty SILT (ML) (RESIDUUM)	SS 1	100	5-6-7 (13)						
5.0		(ML) Orange red black, moist, micaceous, sandy SILT (ML)	SS 2	83	4-5-10 (15)						
7.5		(SM) Tan orange white, moist, micaceous, silty SAND (SM) with rock fragments	SS 3	56	16-40-42 (82)						
10.0			SS 4	44	24-22-38 (60)						
12.5											
15.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 5	60	40-38-50/3"						>>

Bottom of borehole at 15.0 feet.

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 4/4/18 **COMPLETED** 4/4/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								20 40 60 80 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80		
0.0		(OL) TOPSOIL (Approximately 3 inches) (ML) Brown orange, moist, micaceous, sandy SILT (ML) (FILL)								
2.5			SS 1	89	3-3-4 (7)					
5.0			SS 2	94	3-6-7 (13)					
7.5			SS 3	100	4-5-6 (11)					
10.0			SS 4	89	4-5-6 (11)					
12.5		(SM) Orange black, moist, micaceous, silty SAND (SM) (RESIDUUM)								
15.0			SS 5	94	4-4-6 (10)					

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/13/18 17:21 - G:\PROJECTS\18-159.GPJ

CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
								PL	MC LL
								□ FINES CONTENT (%) □	
								20 40 60 80	20 40 60 80
17.5		(SM) Orange black, moist, micaceous, silty SAND (SM) (RESIDUUM) (continued)							
20.0			SS 6	94	3-5-7 (12)				
22.5									
25.0		(SM) Partially weathered rock (PWR-SM) sampled as silty SAND	SS 7	250	50/2"				

Bottom of borehole at 25.0 feet.



**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 4/4/18 **COMPLETED** 4/4/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲				
								20	40	60	80	
0.0		(OL) TOPSOIL (Approximately 3 inches) (ML) Orange brown, wet, micaceous, sandy SILT (ML) (FILL)										
2.5			SS 1	89	6-7-10 (17)							
5.0			SS 2	89	5-7-9 (16)							
7.5			SS 3	94	4-6-8 (14)							
10.0		(ML) Orange tan black, wet, micaceous, sandy SILT (ML) (RESIDUUM)	SS 4	100	4-4-5 (9)							
12.5		(SM) Tan, wet, micaceous, silty SAND (SM) (RESIDUUM)										
15.0			SS 5	89	4-7-9 (16)							

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/13/18 17:21 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County  
**PROJECT NUMBER** 18-159  
**DATE STARTED** 4/4/18 **COMPLETED** 4/4/18  
**DRILLING CONTRACTOR** SE&T  
**DRILLING METHOD** 2 1/4-in HSA  
**LOGGED BY** WEL **CHECKED BY** WEL  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Killian Creek WWTP  
**PROJECT LOCATION** Lincoln County, North Carolina  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 6 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲		
								PL	MC	LL
								20 40 60 80 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80		
0.0		(OL) TOPSOIL (Approximately 3 inches) (GM) Gravel (GM) (FILL) with topsoil and silt								
2.5		(SM) Brown, moist, micaceous, silty SAND (SM) (FILL) with gravel	SS 1	67	4-8-10 (18)					
5.0		(SM) Tan brown, moist micaceous, silty SAND (SM) (FILL)	SS 2	94	4-5-6 (11)					
7.5		(ML) Red and orange, moist, micaceous, sandy SILT (ML) (FILL)	SS 3	72	6-7-11 (18)					
10.0		(SM) Brown white, moist, micaceous, silty SAND (SM) (RESIDUUM)	SS 4	89	5-6-8 (14)					
12.5										
15.0			SS 5	61	4-6-7 (13)					

Bottom of borehole at 15.0 feet.

GEOTECH BH PLOTS - GINT STD US LAB.GDT - 4/13/18 17:21 - G:\PROJECTS\18-159.GPJ

<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.3 (OL) TOPSOIL (Approximately 4 inches)
		SM		(SM) Tan white, moist, micaceous, silty SAND (SM) (RESIDUUM) with cobbles
2.5		SM		2.0 (SM) Partially weathered rock (PWR-SM) with boulders and cobbles
		SM		4.0 (SM) Partially weathered rock (PWR-SM) with boulders
5.0		SM		
				5.5

Refusal at 5.5 feet.  
 Bottom of pit at 5.5 feet.

<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.3 (OL) TOPSOIL (Approximately 4 inches)
		ML		(ML) Tan, moist, micaceous, clayey SILT (ML) (RESIDUUM)
2.5				
		SM		3.0 (SM) Tan and orange, moist, micaceous, silty SAND (SM)
5.0				
		SM		8.0 (SM) Tan black, moist, micaceous, silty SAND (SM) with gravel and cobbles
7.5				
		SM		
10.0				
				12.0 Bottom of pit at 12.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ





<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.3 (OL) TOPSOIL (Approximately 4 inches)
		ML		(ML) Tan brown, moist, micaceous, sandy SILT (ML) (RESIDUUM) with cobbles
2.5				
		SM		3.0 (SM) Partially weathered rock (PWR-SM) with cobbles and boulders
		SM		4.0 (SM) Tan and brown, moist, sitly SAND (SM) with cobbles and boulders
5.0				
		SM		7.5 (SM) Partially weathered rock (PWR-SM) with cobbles and boulders
7.5				
		SM		8.0 (SM) Partially weathered rock (PWR-SM) with cobbles and boulders

Refusal at 8.0 feet.  
 Bottom of pit at 8.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ

<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.4 (OL) TOPSOIL (Approximately 5 inches)
				(ML) Tan brown, moist, micaceous, sandy SILT (ML) (RESIDUUM)
2.5		ML		
5.0				5.0 (SM) Brown, moist, micaceous, silty SAND (SM)
		SM		
7.5				8.0 (SM) Brown white black, moist, micaceous, silty SAND (SM) (End of Test Pit Below Structure)
10.0		SM		
				11.5 Refusal at 11.5 feet. Bottom of pit at 11.5 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County **PROJECT NAME** Killian Creek WWTP  
**PROJECT NUMBER** 18-159 **PROJECT LOCATION** Lincoln County, North Carolina  
**DATE STARTED** 8/7/18 **COMPLETED** 8/7/18 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** inches  
**DRILLING CONTRACTOR** SE&T **GROUND WATER LEVELS:**  
**DRILLING METHOD** Test Pit **AT TIME OF DRILLING** ---  
**LOGGED BY** WEL **CHECKED BY** WEL **AT END OF DRILLING** ---  
**NOTES** CATERPILLAR 320 E L HYDRAULIC EXCAVATOR **AFTER DRILLING** ---

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.3 (OL) TOPSOIL (Approximately 4 inches)
		ML		(ML) Brown, moist, micaceous, sandy SILT (ML) with cobbles (FILL)
2.5				
		SM		3.0 (SM) Tan orange black, moist, micaceous, silty SAND (SM) (FILL)
5.0				
		SM		6.0 (SM) Tan white, moist, micaceous, silty SAND (SM) with cobbles and one boulder (FILL)
7.5				
		SM		8.0 (SM) Tan white, moist, micaceous, silty SAND (SM) with construction debris (FILL)
10.0				
		SM		13.0 (SM) Partially weathered rock (PWR-SM) sampled as silty SAND (RESIDUUM)
12.5				
		SM		
15.0				

Bottom of pit at 15.0 feet.





<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.3 (OL) TOPSOIL (Approximately 4 inches)
		ML		(ML) Orange brown, moist, micaceous, sandy SILT (ML) (RESIDUUM) with cobbles
2.5				
		SM		3.0 (SM) Orange brown, moist, micaceous, silty SAND (SM) with cobbles
		SM		4.0 (SM) Partially weathered rock (PWR-SM) sampled as silty SAND
5.0				
		SM		5.0 (SM) Tan and brown, moist, micaceous, silty SAND (SM) with cobbles
7.5				
		SM		10.0 (SM) Partially weathered rock (PWR-SM) with cobbles and boulders
10.0				
				12.0 Bottom of pit at 12.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ




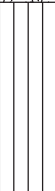



<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		0.4 (OL) TOPSOIL (Approximately 5 inches)
		ML		(ML) Brown, moist, micaceous, sandy SILT (ML) with gravel (RESIDUUM)
2.5		SM		2.0 (SM) Tan brown, moist, micaceous, silty SAND (SM) with gravel
		SM		3.0 (SM) Partially weathered rock (PWR-SM) with cobbles and boulders
5.0				
7.5				
				8.5

Refusal at 8.5 feet.  
 Bottom of pit at 8.5 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ

<b>CLIENT</b> <u>Lincoln County</u>	<b>PROJECT NAME</b> <u>Killian Creek WWTP</u>
<b>PROJECT NUMBER</b> <u>18-159</u>	<b>PROJECT LOCATION</b> <u>Lincoln County, North Carolina</u>
<b>DATE STARTED</b> <u>8/7/18</u> <b>COMPLETED</b> <u>8/7/18</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>inches</u>
<b>DRILLING CONTRACTOR</b> <u>SE&amp;T</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Test Pit</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>WEL</u> <b>CHECKED BY</b> <u>WEL</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>CATERPILLAR 320 E L HYDRAULIC EXCAVATOR</u>	<b>AFTER DRILLING</b> <u>---</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		OL		(OL) TOPSOIL (Approximately 6 inches )
				(ML) Brown, wet, micaceous, sandy SILT (ML) (RESIDUUM)
2.5		ML		
				(SM) Tan, moist, micaceous, silty SAND (SM) with cobbles
5.0		SM		
				(SM) Tan white black, moist, micaceous, silty SAND (SM) with cobbles
7.5		SM		
				(SM) Partially weathered rock (PWR-SM) with cobbles and boulders
10.0		SM		
				Refusal at 11.0 feet. Bottom of pit at 11.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 8/17/18 09:57 - G:\PROJECTS\18-159.GPJ

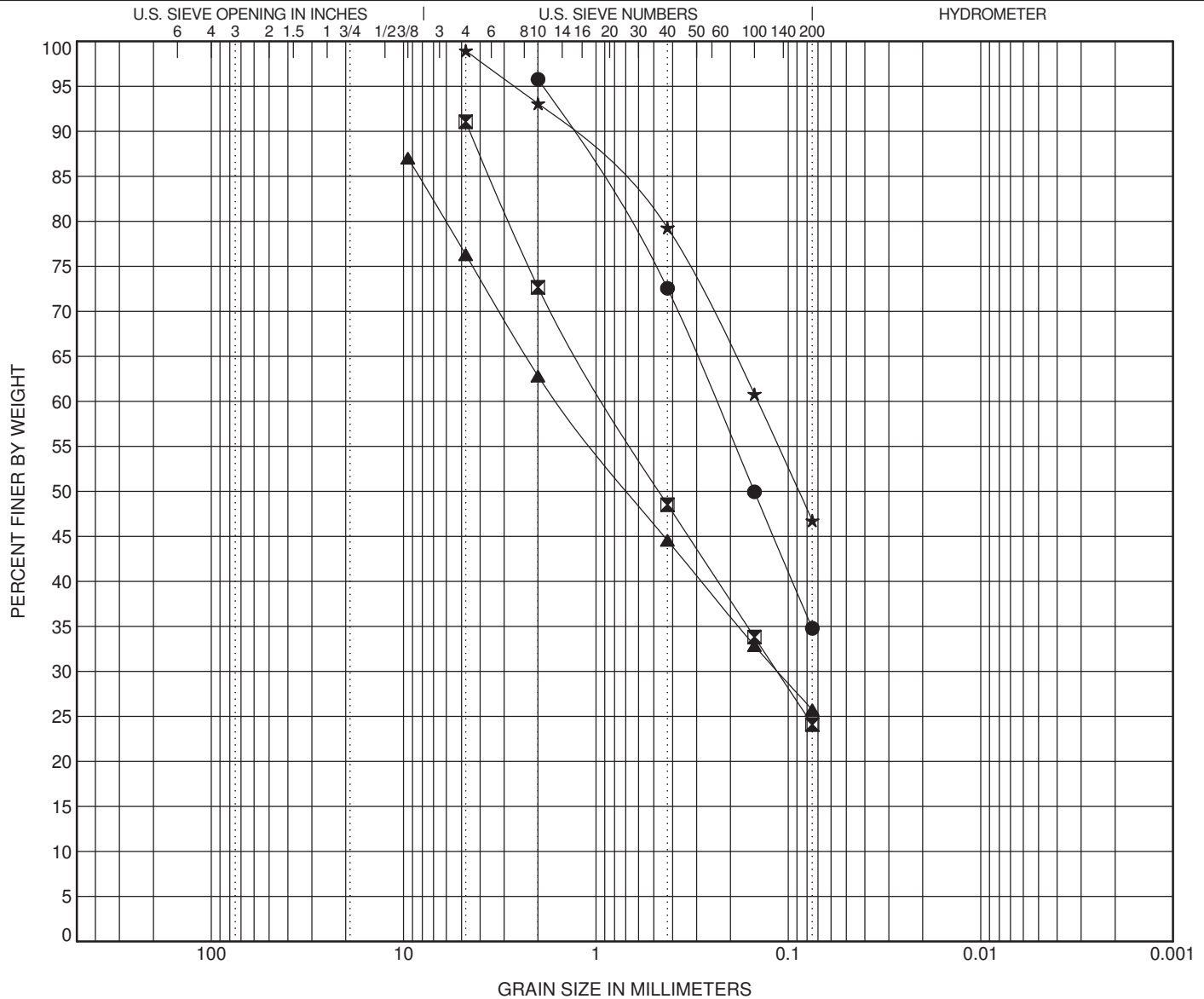
# GRAIN SIZE DISTRIBUTION

CLIENT Lincoln County

PROJECT NAME Killian Creek WWTP

PROJECT NUMBER 18-159

PROJECT LOCATION Lincoln County, North Carolina



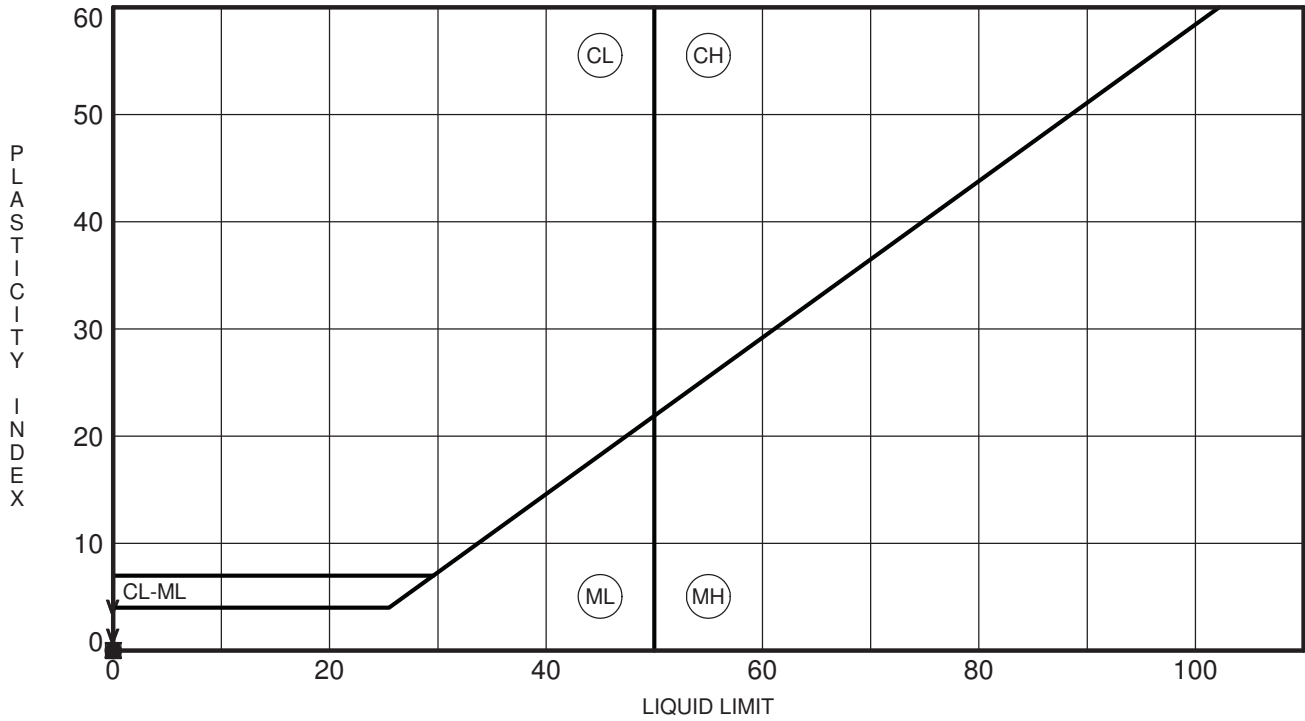
COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
● 159-2	13.5	Tan black, moist, micaceous, silty SAND (SM)	NP	1	NP		
☒ 159-2	18.5	Tan white black, moist, micaceous, silty SAND (SM)	NP	1	NP		
▲ 159-16	13.5	Tan orange white, moist, silty SAND (SM) with gravel	NP	1	NP		
★ 159-19	3.5	Tan brown, moist, micaceous, silty SAND (SM)	NP	1	NP		

BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 159-2	13.5	2	0.238				61.0		34.8
☒ 159-2	18.5	4.75	0.887	0.114			67.0		24.1
▲ 159-16	13.5	9.5	1.576	0.114		10.7	50.6		25.7
★ 159-19	3.5	4.75	0.144				52.2		46.8

**ATTERBERG LIMITS' RESULTS**

CLIENT Lincoln County PROJECT NAME Killian Creek WWTP  
 PROJECT NUMBER 18-159 PROJECT LOCATION Lincoln County, North Carolina



	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	159-2	13.5	NP	1	NP	34.8	Tan black, moist, micaceous, silty SAND (SM)
☒	159-2	18.5	NP	1	NP	24.1	Tan white black, moist, micaceous, silty SAND (SM)
▲	159-16	13.5	NP	1	NP	25.7	Tan orange white, moist, silty SAND (SM) with gravel
★	159-19	3.5	NP	1	NP	46.8	Tan brown, moist, micaceous, silty SAND (SM)

ATTERBERG LIMITS - GINT STD US LAB.GDT - 4/12/18 17:09 - G:\PROJECTS\18-159.GPJ

CLIENT Lincoln County

PROJECT NAME Killian Creek WWTP

PROJECT NUMBER 18-159

PROJECT LOCATION Lincoln County, North Carolina

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
159-1	1.0							5.6			
159-1	3.5							3.4			
159-1	6.0							2.8			
159-1	8.5							3.5			
159-1	13.5							3.6			
159-1	18.5							5.4			
159-2	1.0							17.9			
159-2	3.5							18.1			
159-2	6.0							8.7			
159-2	8.5							9.1			
159-2	13.5	NP	1	NP	2	34.8	SM	10.8			
159-2	18.5	NP	1	NP	4.75	24.1	SM	10.3			
159-2	23.5							15.9			
159-3	1.0							14.5			
159-3	3.5							16.2			
159-3	6.0							11.5			
159-3	8.5							13.4			
159-3	13.5							10.8			
159-4	1.0							26.5			
159-4	3.5							16.5			
159-4	6.0							17.0			
159-4	8.5							12.1			
159-4	13.5							6.3			
159-5	1.0							14.5			
159-5	3.5							5.4			
159-5	6.0							6.2			
159-5	8.5							5.9			
159-5	13.5							2.6			
159-6	1.0							18.5			
159-6	3.5							15.2			
159-6	6.0							13.5			
159-6	8.5							13.3			
159-6	13.5							13.8			
159-7	1.0							16.6			
159-7	3.5							17.0			
159-7	6.0							13.5			
159-7	8.5							10.1			
159-7	13.5							7.8			
159-8	1.0							23.4			
159-8	3.5							14.4			
159-8	6.0							7.4			
159-8	8.5							6.8			
159-8	13.5							5.1			

LAB SUMMARY - GINT STD US LAB.GDT - 4/12/18 13:43 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County

**PROJECT NAME** Killian Creek WWTP

**PROJECT NUMBER** 18-159

**PROJECT LOCATION** Lincoln County, North Carolina

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
159-9	1.0							9.0			
159-9	3.5							12.2			
159-9	6.0							7.2			
159-9	8.5							5.3			
159-9	13.5							4.5			
159-10	1.0							4.5			
159-10	3.5							13.3			
159-10	6.0							7.0			
159-10	8.5							2.3			
159-10	13.5							2.4			
159-11	1.0							14.2			
159-11	3.5							14.7			
159-11	6.0							14.8			
159-11	8.5							11.8			
159-11	13.5							7.8			
159-12	1.0							10.7			
159-12	3.5							8.8			
159-12	6.0							8.0			
159-12	8.5							7.0			
159-13	1.0							8.1			
159-13	3.5							7.9			
159-13	6.0							3.5			
159-13	8.5							2.8			
159-13	13.5							2.6			
159-13	18.5							4.8			
159-13	20.0							2.9			
159-14	1.0							19.6			
159-14	3.5							15.7			
159-14	6.0							7.0			
159-14	8.5							9.5			
159-14	13.5							2.6			
159-15	1.0							23.0			
159-15	3.5							22.2			
159-15	6.0							8.5			
159-15	8.5							5.5			
159-15	13.5							8.5			
159-16	1.0							30.4			
159-16	3.5							28.1			
159-16	6.0							8.0			
159-16	8.5							8.9			
159-16	13.5	NP	1	NP	9.5	25.7	SM	4.5			
159-17	1.0							21.7			
159-17	3.5							26.4			

LAB SUMMARY - GINT STD US LAB.GDT - 4/12/18 13:43 - G:\PROJECTS\18-159.GPJ

**CLIENT** Lincoln County

**PROJECT NAME** Killian Creek WWTP

**PROJECT NUMBER** 18-159

**PROJECT LOCATION** Lincoln County, North Carolina

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
159-17	6.0							25.5			
159-17	8.5							24.0			
159-17	13.5							23.2			
159-17	18.5							21.9			
159-17	23.5							7.0			
159-18	1.0							39.6			
159-18	3.5							38.6			
159-18	6.0							39.8			
159-18	8.5							36.9			
159-18	13.5							24.6			
159-19	1.0							15.6			
159-19	3.5	NP	1	NP	4.75	46.8	SM	21.6			
159-19	6.0							26.0			
159-19	8.5							22.3			
159-19	13.5							16.2			

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ROY COOPER  
*Governor*

MICHAEL S. REGAN  
*Secretary*

S. DANIEL SMITH  
*Interim Director*

February 14, 2019

**LETTER OF APPROVAL WITH MODIFICATIONS**

Lincoln County  
Attention: Don Chamblee, PE, Director of Utilities  
115 West Main Street  
Lincolnton, North Carolina 28092

RE: Project Name: Killian Creek Waste Water Treatment Plant Phase 3 Expansion  
Acres Approved: 8  
Project ID: LINCO-2019-007  
County: Lincoln, City: Stanley  
Address: Old Plank Road  
River Basin: Catawba  
Stream Classification: Other  
Submitted By: Lincoln County  
Date Received by LQS: February 8, 2019  
Plan Type: Revised

Dear Mr. Chamblee:

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.

Please be aware that your project will be covered by the enclosed NPDES Construction Stormwater General Permit NCG010000. Please become familiar with all the requirements and conditions of this permit in order to achieve compliance.

Please be advised that Title 15A NCAC 4B .0118(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, you should consider this letter to give the Notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

Letter of Approval with Modifications  
Lincoln County  
February 14, 2019  
Page 2 of 3


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 insure 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 have provided. 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 notify us if you plan to have a preconstruction conference.

Your cooperation is appreciated.

Sincerely,



Tamera Eplin, PE, CPESC  
Assistant Regional Engineer  
Land Quality Section

Enclosures: Certificate of Approval  
Modifications Required for Approval  
NPDES Permit

c: WK Dickson  
Attention: Charles Froneberger, PE  
616 Colonnade Drive  
Charlotte, North Carolina 28205

Inspection Department

### **MODIFICATIONS REQUIRED FOR APPROVAL**

Project Name: Killian Creek Waste Water Treatment Plant Phase 3 Expansion  
Project ID: LINCO-2019-007  
County: Lincoln

#### **Modifications pursuant to applicable North Carolina General Statutes and/or Regulations:**

1. Additional measures may be required - The applicant is responsible for the control of sediment on-site. If the approved erosion and sedimentation control measures prove insufficient, the applicant must take those additional steps necessary to stop sediment from leaving this site. [15A NCAC 4B .0115]

#### **Additional Comments:**

1. The NCG01 General Permit, as well as NCG01 stabilization requirements, NC DWR List of Approved PAMS/Flocculants, and NCG01 Combined Self-Monitoring Form may be found at: <https://deq.nc.gov/about/divisions/energy-mineral-land-resources/npdes-stormwater-gps>
2. A New NCG01 General Permit goes into effect March 1, 2019 and requires a separate application process. If you have future projects planned requiring an erosion and sediment control plan and General Construction Stormwater Permit, recommend you review our document titled "Q&A About the New NCG01 Permit", available at <https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/stormwater-permits/construction-sw>

# 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 Environment and Natural Resources 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).

KILLIAN CREEK WASTE WATER TREATMENT PLANT PHASE 3 EXPANSION  
OLD PLANK ROAD, STANLEY, LINCOLN COUNTY

Project Name and Location

LINCO - 2019 - 007

FEBRUARY 14, 2019

Date of Plan Approval

W/ MODIFICATIONS



TAMERA EPLIN

ASSISTANT Regional Engineer



# NPDES Stormwater Discharge Permit for Construction Activities



Technical Bulletin for NCG010000

Revised Aug. 22, 2013

## What is this permit?

This is your General Stormwater Permit for Construction Activities, developed to meet federal National Pollutant Discharge Elimination System (NPDES) requirements. It is separate and in addition to your Erosion and Sedimentation Control (E&SC) Plan.

Federal regulations adopted by the U.S. Environmental Protection Agency (EPA) and N.C. Environmental Management Commission require an NPDES stormwater permit for your project. In North Carolina, the EPA has delegated authority to administer the NPDES program to the Department of Environment and Natural Resources.

The E&SC plan approved by the Division of Energy, Mineral and Land (DEMLR), or a delegated local program, contains the core erosion control requirements for your project. The NPDES Stormwater General Permit contains additional requirements related to a broader range of water quality issues. **These permits are related, but separate. Both contain conditions your project site must meet.**

## Are there new requirements in this permit?

This General Permit reflects changes made in the federal regulations effective Feb. 1, 2010, that regulate discharges from construction sites. The federal regulations resulted from litigation decisions that mandated construction activities over a certain size must contain additional measures to reduce the amount of wastes and sediment loading that reach the nation's waters.

The Department of Environment and Natural Resources established the Construction General Permit Technical Advisory Group to guide the development of this NPDES permit. A draft permit was available for public review in May 2011, and the final permit became effective on Aug. 3, 2011.

The most notable change in the new permit is a requirement that ground stabilization, such as wheat straw application, be applied within 14 days from the last land-disturbing activity. For steep slopes, that area must be stabilized within 7 days. Please see page 2 of this technical bulletin for more details.

## Do I need to submit a Notice of Intent to have coverage under this permit?

No. Your project is covered by this permit upon approval of an adequate erosion and sedimentation control plan that meets requirements for surface dewatering of basins and ground stabilization timeframes.

## What does this permit require me to do?

You should read and become familiar with the provisions of this permit. Below is a list of the major requirements, with indications where those differ from the previous Construction Stormwater General Permit.

### Erosion and Sediment Control Plan

You must implement the E&SC Plan approved for your project by DEMLR or by a delegated local program. Adherence to that E&SC

Plan is an enforceable component of this General Permit.

Your E&SC plan will identify areas where the more stringent 7- and 14-day ground stabilization requirements apply. See "Ground Stabilization Requirements" on page 2 of this bulletin.

### Monitoring and Inspections

- ◆ You must keep a rain gauge on the project site.
- ◆ Dedicated demolition and other waste areas and earthen material

stockpiles must be located at least 50' from storm drains or streams unless no alternative is feasible (new requirement).

- ◆ You must inspect all E&SC measures at least once a week and within 24 hours after any storm event greater than a half-inch (during a 24-hour period). You must take immediate corrective action for any device failure.

- ◆ You must inspect all outlets where stormwater runoff leaves the site and evaluate the effect on nearby streams or wetlands.

*(continued on reverse side)*

◆ Corrective action must be taken if sediment is deposited off-site or into a stream or wetland, or causes a visible increase in turbidity (cloudiness) of any waterbody.

◆ You must keep records of these inspections and any corrective actions taken.

**Operation and Maintenance**

You must provide the operation and maintenance necessary to maintain optimal performance of stormwater controls. This means you must take corrective action if erosion and sediment control measures are not operating properly. Operation and maintenance includes, but is not limited to:

- ◆ Regularly cleaning out sedimentation basins.
- ◆ Stabilizing eroded banks,

channels or spillway structures.

- ◆ Repairing/clearing out inlets and outlets.
- ◆ Repairing and maintaining storm drainage inlet and outlet protection.
- ◆ Repairing piping, seepage and mechanical damage.
- ◆ Repairing silt fence damage.

**Reporting**

The self-inspections required by this permit are an opportunity to identify impacts to nearby waters. **If you observe sediment that has deposited in a stream or wetland, you must notify the DEMLR regional office within 24 hours and provide written notice within five days** (see #3 on page 6 of the General Permit).






**Non-compliance and Fines**

Projects that violate Stormwater Permit conditions and/or have unauthorized water quality impacts are subject to fines. Civil penalties of up to \$25,000 per day for each violation may be assessed.

**Inspections**

Staff from DEMLR and local programs with delegated authority will perform random inspections of your project site to ensure compliance with state and federal regulation governing construction activities. That means that your project, if found to be in violation, could potentially be subject to enforcement action by both DEMLR and the local program. The inspections may be routine in nature or the result of a citizen complaint.

**Ground Stabilization Requirements**

Site Area Description	Stabilization	Timeframe Exceptions
 Perimeter dikes, swales, ditches and slopes	7 days	None
 High Quality Water (HQW) Zones	7 days	None
 Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
 Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
 All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

**Additional information is available online:**



- NC Stormwater Permitting <http://portal.ncdenr.org/web/lr/stormwater>
- NCG01 Permit Information <http://portal.ncdenr.org/web/lr/construction-stormwater>
- Map of Regional Offices <http://portal.ncdenr.org/web/lr/division-contacts>

**Still have questions? Call the DEMLR Regional Office nearest your project's location:**

Asheville Office	(828) 296-4500	Washington Office	(252) 946-6481
Fayetteville Office	(910) 433-3300	Wilmington Office	(910) 796-7215
Mooresville Office	(704) 663-1699	Winston-Salem Office	(336) 771-5000
Raleigh Office	(919) 791-4200	Central Office	(919) 807-6300

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF WATER QUALITY  
**GENERAL PERMIT – NCG 010000**  
TO DISCHARGE STORMWATER UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
for  
**CONSTRUCTION ACTIVITIES**

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by North Carolina Environmental Management Commission and the Federal Water Pollution Control Act as amended:

All owners or operators of stormwater point source discharges associated with construction activities including clearing, grading or excavation activities resulting in the disturbance of land greater than or equal to one acre, or that are part of a common plan of development of that size, are hereby authorized to discharge stormwater to the surface waters of North Carolina or to a separate storm sewer system conveying stormwater to the surface waters in accordance with the terms and conditions set forth herein. Failure to receive coverage under this permit or violations of any of the conditions listed may result in assessment of state or federal civil or criminal penalties for each day of violation.

The General Permit shall become effective on August 1, 2016.  
The General Permit shall expire at midnight on July 31, 2018.

Signed this day July 22, 2016

*Original Signed by Toby Vinson*

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*for* Tracy Davis, Director  
Division of Energy, Mineral and Land Resources  
By the Authority of the Environmental Management Commission

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**SECTION I**  
**COVERAGE UNDER THE GENERAL PERMIT**

Until this State of North Carolina General Permit expires or is modified or revoked, the permittee is authorized to discharge stormwater in accordance with the terms and conditions of this permit and in accordance with an approved Erosion and Sedimentation Control Plan by the North Carolina Division of Land Resources, Land Quality Section, or a delegated local program under the provisions and requirements of North Carolina General Statutes in Article 4 of Chapter 113A to the surface waters of North Carolina or to a separate storm sewer system. The permit, along with state statutes (N.C.G.S. 143-215.1) and rules (NCAC 2H .0100) relating to stormwater permitting are designed to work together to assure compliance with the NPDES requirements of the Clean Water Act. Furthermore, North Carolina rules in Title 15A NCAC 2H .0126 adopt by reference the federal stormwater permitting requirements.

Any other point source discharge to surface waters of the state is prohibited unless covered by another permit, authorization or approval. The discharges allowed by this General Permit shall not cause or contribute to violations of North Carolina Water Quality Standards for surface waters and wetlands (15A NCAC 2B .0200). Discharges allowed by this permit must meet all applicable water quality certification or permit requirements as outlined in 15A NCAC 2H .0500 and 2H .1300. This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

**This General Permit is applicable to point source discharges from construction activities disturbing one or more acres of land.** The application to the Division of Land Resources or a delegated local program for approval of a local Erosion and Sedimentation Control Plan (E&SC Plan) shall be considered to take the place of a Notice of Intent for coverage under this General Permit for those projects requiring this Permit coverage. Coverage under this General Permit shall become effective upon issuance of an approval for the E&SC Plan by the Division of Land Resources or delegated local program that includes the following:

- a. Designation on the plans where the specific ground stabilization requirements apply as per Section II.B.2 of this permit.
- b. Designs of basins with surface withdrawal as per Section II.B.4 of this permit.

Prior to the commencement of construction and land disturbing activities, approval of the E&SC Plan shall be obtained.

**This General Permit revision reflects changes made in the federal regulations effective February 1, 2010.** The federal regulations were a result of litigation that mandated that construction activities over a certain size must contain additional specifications that would result in reduced wastes and sediment loading reaching the nation's waters. The Division of Water Quality and the Division of Land Resources established a Construction General Permit Technical Advisory Group (CTAG) to provide them guidance in developing the permit. The CTAG was comprised of 14 members who represented a broad range of environmental, regulatory, government and development interests. A Draft Construction General Permit was prepared and made available for review on May 13, 2011. A public meeting was held on June 7th. This permit reflects the input received during the twelve- month development process.

Any owner or operator not wishing to be covered or limited by this General Permit may apply for an individual NPDES permit in accordance with NPDES procedures in 15A NCAC 2H .0100, stating the reasons supporting the request. Any application for an individual permit should be made at least 180 days prior to the time the permit is needed unless waived, by the Director.

This General Permit does not cover activities or discharges covered by an individual NPDES permit until the individual permit has expired or has been rescinded. Any person conducting an activity covered by an

individual permit but which could be covered by this General Permit may request that the individual permit be rescinded and coverage under this General Permit be provided.

The Division of Water Quality partners with the Division of Land Resources to implement a complete program for construction site coverage that includes state sedimentation control and NPDES stormwater control. The Division of Land Resources implements their control programs through an Erosion and Sedimentation Control Plan (E&SC Plan) issued for each construction site in the state disturbing one or more acres of land. An E&SC Plan is required for each site by the Division of Land Resources or a delegated local government program. The NPDES Construction Stormwater permit (NCG010000) is attached to Erosion and Sedimentation Control Plan approvals. The permittee is responsible for abiding by the conditions of both of these documents.

The Sedimentation Pollution Control Act of 1973 places a duty upon the Sedimentation Control Commission to “develop recommended methods of control of sedimentation and prepare and make available for distribution publications and other materials dealing with sedimentation control techniques appropriate for use by persons engaged in land-disturbing activities.” The Sedimentation Control Commission and the Division of Land Resources have adopted the North Carolina Erosion and Sediment Control Planning and Design Manual as the document to provide that guidance for use at all construction sites in the state. The individual Erosion and Sedimentation Control Plans are developed based on this guidance and become a condition of the Division of Water Quality’s Construction Stormwater General Permit. As provided in this permit, “deviation from the approved E&SC Plan, or approved amendment to that plan, shall constitute a violation of the terms and conditions of this general permit.”

## **SECTION II** **STORMWATER POLLUTION PREVENTION REQUIREMENTS**

The State construction-related stormwater pollution prevention program provides for: (a) identification of the potential sources of stormwater pollution at the individual construction site; (b) description of the stormwater control measures to reduce or eliminate pollutants in stormwater discharges from the construction site; and (c) identification of the procedures the operator will implement to comply with the terms and conditions of this general permit and the Erosion and Sedimentation Control Plan (E&SC Plan). In North Carolina, the approved **Erosion and Sedimentation Control Plan** for the site, and the **NCG01 Construction General Permit** are considered the **Stormwater Pollution Prevention Plan (SWPPP)** for that site. These two documents, and any specifically-added water quality conditions for that site, contain the provisions necessary to meet the federal regulatory requirements of the NPDES program including provisions implementing the Effluent Limitations Guidelines effective at the time of this permit.

### **SECTION II.A. - STORMWATER POLLUTION PREVENTION REQUIREMENTS** **IN THE EROSION AND SEDIMENTATION CONTROL PLAN**

The Erosion and Sedimentation Control program is mandated and funded according to state statutes. The majority of the technology-based requirements needed to satisfy the federal stormwater pollution prevention specifications are addressed in the approved E&SC Plan. Each applicant for an E&SC Plan approval is required to comply with a “checklist” of over 50 site-specific conditions\*. The categories of these conditions include:

- 1) location information,
- 2) site features,
- 3) control measures,
- 4) drainage features,
- 5) stormwater calculations,
- 6) stabilization,
- 7) ownership information and
- 8) construction sequencing.

\*The individual requirements to be addressed in each E&SC Plan application can be found at <http://portal.ncdenr.org/web/lr/erosion> . See “Plan check list for designers.”

## **SECTION II.B. - STORMWATER POLLUTION PREVENTION REQUIREMENTS IN THE NC CONSTRUCTION GENERAL PERMIT**

In addition to the stormwater pollution prevention controls found in the E&SC Plan, this Construction General Permit contains additional conditions that must be met in order to comply with the NPDES program requirements. They are as follows:

### **1) Construction Site Pollutants**

Permittee must manage activities on the site such that water quality standards are not violated from site activities or allowed discharges. In addition to stream pollution from sediment discharge, other activities on construction and development sites can result in pollutants reaching the state’s waters. EPA has prepared guidance documents that provide best management practices that address many activities. See [http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min\\_measure&min\\_measure\\_id=4](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4)

The following activities, and others on a site-specific basis, require oversight throughout the construction and development process to assure that all water quality standards are protected:

- a) Equipment Operation and Maintenance - Equipment utilized during the construction activity on a site must be operated and maintained in such a manner as to prevent the potential or actual pollution of the surface or ground waters of the state. Fuels, lubricants, coolants, and hydraulic fluids, or any other petroleum products, shall not be discharged onto the ground or into surface waters. Spent fluids shall be cleaned up and disposed of in a manner so as not to enter the waters, surface or ground, of the state and in accordance with applicable state and federal regulations.
- b) Material Handling - Herbicide, pesticide, and fertilizer usage during the construction activity shall be consistent with the Federal Insecticide, Fungicide, and Rodenticide Act and shall be in accordance with label restrictions.
- c) Building Material Waste Handling
  - i) All wastes composed of building materials shall be disposed of in accordance with North Carolina General Statutes, Chapter 130A, Article 9 - Solid Waste Management, and rules governing the disposal of solid waste (North Carolina Administrative Code Section 15A NCAC 13B).
  - ii) Locate areas dedicated for management of land clearing and demolition debris, construction and domestic waste, and hazardous or toxic waste. This location shall be at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available.
  - iii) Dumping of paint and other liquid building material wastes in storm drains is prohibited.
  - iv) Litter and Sanitary Waste - The permittee shall control the management and disposal of litter and sanitary waste from the site.
- d) Location of Stock Piles - Locate earthen-material stock pile areas at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available.
- e) Handling of Concrete
  - i) Concrete materials onsite, including excess concrete, must be controlled and managed to avoid contact with surface waters, wetlands or buffers. No concrete or cement slurry shall be discharged from the site. (Note that discharges from onsite concrete plants require coverage under a separate NPDES permit – NCG140000.)
  - ii) Any hardened concrete residue will be disposed of, or recycled on site, in accordance with local and state solid waste regulations.

## **2) Ground Stabilization**

- a) Soil stabilization shall be achieved on any area of a site where land-disturbing activities have temporarily or permanently ceased according to the following schedule:
  - i) All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1) shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 7 calendar days from the last land-disturbing activity.
  - ii) All other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from the last land-disturbing activity.
- b) Conditions - In meeting the stabilization requirements above, the following conditions or exemptions shall apply:
  - i) Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable.
  - ii) All slopes 50' in length or greater shall apply the ground cover within 7 days except when the slope is flatter than 4:1. Slopes less than 50' shall apply ground cover within 14 days except when slopes are steeper than 3:1, the 7 day-requirement applies.
  - iii) Any sloped area flatter than 4:1 shall be exempt from the 7-day ground cover requirement.
  - iv) Slopes 10' or less in length shall be exempt from the 7-day ground cover requirement except when the slope is steeper than 2:1.
  - v) Although stabilization is usually specified as ground cover, other methods, such as chemical stabilization, may be allowed on a case-by-case basis.
  - vi) For portions of projects within the Sediment Control Commission-defined "High Quality Water Zone" (15A NCAC 04A. 0105), stabilization with ground cover shall be achieved as soon as practicable but in any event on all areas of the site within 7 calendar days from the last land-disturbing act.
  - vii) Portions of a site that are lower in elevation than adjacent discharge locations and are not expected to discharge during construction may be exempt from the temporary ground cover requirements if identified on the approved E&SC Plan or added by the permitting authority.

## **3) Self Inspection and Reporting Requirements**

Minimum self inspection and reporting requirements are as follows unless otherwise approved in writing by the Division of Water Quality.

- a) A rain gauge shall be maintained in good working order on the site unless another rain-monitoring device has been approved by the Division of Water Quality.
- b) A written record of the daily rainfall amounts shall be retained and all records shall be made available to Division of Water Quality or authorized agent upon request. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, the cumulative rain measurement for those un-attended days will determine if a site inspection is needed. (Note: if no rainfall occurred, the permittee must record "zero").
- c) Erosion and sedimentation control measures shall be inspected to ensure that they are operating correctly. Inspection records must be maintained for each inspection event and for each measure. At a minimum, inspection of measures must occur at the frequency indicated below:
  - i) All erosion and sedimentation control measures must be inspected by or under the direction of the permittee at least once every seven calendar days, and
  - ii) All erosion and sediment control measures must be inspected by or under the direction of the permittee within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period.
- d) Once land disturbance has begun on the site, stormwater runoff discharge outfalls shall be inspected by observation for erosion, sedimentation and other stormwater discharge characteristics such as clarity, floating solids, and oil sheens. Inspections of the outfalls shall be made at least once every seven calendar days and within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period.

- e) Inspections are only required to be made during normal business hours. When adverse weather conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection can be delayed until it is deemed safe to perform these duties. (Times when inspections were delayed because of safety issues should be noted in the Inspection Record.) If the inspection cannot be done on that day, it must be completed on the following business day.
- f) Twenty-four Hour Reporting for visible sediment deposition
  - i) The permittee shall report to the Division of Water Quality central office or the appropriate regional office any visible sediment being deposited in any stream or wetland or any noncompliance which may endanger health or the environment. (See Section VIII of this permit for contact information.) Any information shall be provided orally or electronically within 24 hours from the time the permittee became aware of the circumstances.
  - ii) A written submission shall be provided to the appropriate regional office of the Division of Water Quality within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the sediment deposition and actions taken to address the cause of the deposition. The Division of Water Quality staff may waive the requirement for a written report on a case-by-case basis.
- g) Records of inspections made during the previous 30 days shall remain on the site and available for agency inspectors at all times during normal working hours, unless the Division of Water Quality provides a site-specific exemption based on unique site conditions that make this requirement not practical. Older records must be maintained for a period of three years after project completion and made available upon request. The records must provide the details of each inspection including observations, and actions taken in accordance with this permit. The permittee shall record the required rainfall and monitoring observations on the Inspection Record form provided by the Division or a similar inspection form that is inclusive of all of the elements contained in the Division's form. Use of electronically-available records, in lieu of the required paper copies for inspection will be allowed if shown to provide equal access and utility as the hard-copy records.
- h) Inspection records must include, at a minimum, the following:
  - i) Control Measure Inspections: Inspection records must include at a minimum: 1) identification of the measures inspected, 2) date and time of the inspection, 3) name of the person performing the inspection, 4) indication of whether the measures were operating properly, 5) description of maintenance needs for the measure, 6) corrective actions taken and (7) date of actions taken, as well as the date and amounts of rainfall received.
  - ii) Stormwater Discharge Inspections: Inspection records must include at a minimum: 1) identification of the discharge outfall inspected, 2) date and time of the inspection, 3) name of the person performing the inspection, 4) evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5) indication of visible sediment leaving the site, 6) actions taken to correct/prevent sedimentation and 7) date of actions taken.
  - iii) Visible Sedimentation Found Outside the Site Limits: Inspection records must include: 1) an explanation as to the actions taken to control future releases, 2) actions taken to clean up or stabilize the sediment that has left the site limits and 3) the date of actions taken.
  - iv) Visible Sedimentation Found in Streams or Wetlands: All inspections should include evaluation of streams or wetlands onsite or offsite (where accessible) to determine if visible sedimentation has occurred.
- i) Visible Stream Turbidity - If the discharge from a site results in an increase in visible stream turbidity, inspection records must record that evidence and actions taken to reduce sediment contributions. Sites discharging to streams named on the state's 303(d) list as impaired for sediment-related causes may be required to perform additional monitoring, inspections or

application of more-stringent management practices if it is determined that the additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. If a discharge covered by this permit enters a stream segment that is listed on the Impaired Stream List for sediment-related causes, and a Total Maximum Daily Load (TMDL) has been prepared for those pollutants, the permittee must implement measures to ensure that the discharge of pollutants from the site is consistent with the assumptions and meets the requirements of the approved TMDL. The Division of Water Quality 303(d) list can be found at: [http://h2o.enr.state.nc.us/tmdl/General\\_303d.htm/](http://h2o.enr.state.nc.us/tmdl/General_303d.htm/)

#### **4.) Sediment Basins**

Sediment basins and traps shall meet the following requirements:

- a) Outlet structures shall be utilized that withdraw water from the surface.
- b) For basins or traps that have a drainage area of less than 1.0 acre, draw-down designs specified in the Division of Land Resources or delegated local program requirements are acceptable.
- c) Chemical treatment
  - i) All treatment chemicals must be stored in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures designed to protect adjacent surface waters.
  - ii) All treatment chemicals must be used in accordance with dosing specifications and application rates provided by the manufacturer, supplier and as specified by the Division of Water Quality.
  - iii) The Permittee must only use chemicals that have been approved by the NC Division of Water Quality and posted on their "North Carolina Division of Water Quality Approved PAMS/Flocculants List" found on their web site at: <http://portal.ncdenr.org/web/wq/ws/su>.
  - iv) The Permittee must route stormwater treated with polymers, flocculants, or other treatment chemicals through sediment trapping, filtering, and/or settling devices(s) to ensure adequate removal of sediment flocculent prior to discharge to surface waters.
- d) Discharge requirement - Discharges must meet the statutory requirements of the Sediment Pollution Control Act and utilize the provisions of Section 6.74 of the Erosion and Sediment Control Planning and Design Manual to assure that buffers and vegetated areas will be used to reduce the potential for visible siltation outside of the 25% buffer zone nearest the land-disturbing activity.

#### **5.) Discharges to Special or Threatened Waters**

- a) Disturbed areas within one mile of and draining to waters where federally-listed threatened or endangered aquatic species are present shall be limited at any time to a maximum total area within the boundaries of the tract of 20 acres. These projects shall also use control measures that are designed, installed and maintained in accordance with criteria set forth in 15A NCAC 04B .0124 – Design Standards in Sensitive Watersheds. The Division of Water Quality may require additional/alternative protection measures or require coverage under an individual Construction NPDES Stormwater permit. Other management practices may be acceptable if these designs are shown by the applicant, to the satisfaction of the Director, to provide equivalent protection.
- b) Construction activities in High Quality Waters Zones require quicker ground stabilization provisions as specified in Section II.B.2.b. of the permit.

### **SECTION III** **FRAMEWORK OF PERMIT COVERAGE**

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge stormwater associated with construction activity including clearing, grading and excavation activities resulting in the disturbance of land and related support activities. Such discharges shall be controlled, limited and monitored as specified in this permit.

- 1) Continuation of Previously Permitted Projects - Projects and their corresponding activities permitted under the previous version of the NC general permit for construction activities will continue to be valid with the previous permit conditions and will be considered covered under this general permit.
- 2) Projects submitted prior to the effective date of the permit – Complete project applications that were received prior to the effective date of this permit, but not approved by the permitting authority until after approval of this NPDES permit, can rely on design and management practices effective at the time of application submittal.
- 3) Implementation of the Erosion and Sedimentation Control Plan (E&SC Plan):
  - a) The Permittee must implement and follow the E&SC Plan, which has been approved by the Division of Land Resources or local delegated program.. The approved E&SC Plan is considered a condition of this general permit.
  - b) Deviation from the approved E&SC Plan, or approved amendment, shall constitute a violation of the terms and conditions of this general permit except that deviation from the approved plan will be allowed:
    - i) to correct an emergency situation where sediments are being discharged off the site, or,
    - ii) when minor modifications have been made that result in an alteration or relocation of an erosion or sedimentation control measure and does not affect the ability of the measure to perform as intended.
  - c) Allowed deviations must be noted on the approved E&SC Plan and maintained at the job site.
  - d) Prior to the commencement of any land disturbance on-site, and during the construction activities, a copy of the approved E&SC Plan and this NPDES construction permit shall be maintained on the site. These documents must be kept current and up to date.
- 4) BMPs and Control Measures - Consistent with the provisions contained in this permit and the E&SC Plan, the permittee must select, install, implement and maintain best management practices (BMPs) and control measures that minimize pollutants in the discharge to meet the requirements of this permit.
- 5) Additional Action - If there is evidence indicating that the stormwater discharges from the site are impacting or have the potential to impact surface waters or wetlands, the Division of Water Quality may take appropriate actions including any or all of the following:
  - a) take compliance and enforcement action;
  - b) require the permittee to include and implement appropriate control and restoration measures;
  - c) require the permittee to develop and implement additional site-specific stormwater pollution prevention measures;
  - d) require the permittee to obtain an individual permit.
- 6) When an Individual Permit may be Required - The Director may require any owner/operator authorized to discharge under a certificate of coverage issued pursuant to this general permit to apply for and obtain an individual permit or a general permit with additional conditions. Any interested person may petition the Director to require an individual permit pursuant to 15A NCAC 2H .0127. Cases where an individual permit may be required include, but are not limited to, the following:
  - a) The receiving stream is of a unique quality and the standard conditions may not provide adequate protection;
  - b) The discharger is a significant contributor of pollutants;
  - c) Conditions at the permitted site change, altering the constituents and/or characteristics of the discharge such that the discharge no longer qualifies for a General Permit;

- d) A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
  - e) The discharge violates the terms or conditions of this general permit;
  - f) Effluent limitations are promulgated for the point sources covered by this general permit;
  - g) A Water Quality Management Plan containing requirements applicable to such point sources is approved after the issuance of this general permit.
- 7) When an Individual Permit may be Requested - Any permittee operating under this general permit may request to be excluded from the coverage of this general permit by applying for an individual permit. When an individual permit is issued to an owner/operator the applicability of this general permit is automatically terminated on the effective date of the individual permit.

#### **SECTION IV** **OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

- 1) Proper Operation and Maintenance - The permittee shall at all times properly operate and maintain all control measures and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this general permit.
- 2) Need to Halt or Reduce not a Defense - It shall not be a defense for a permittee in an enforcement action that it was necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this general permit.
- 3) Bypassing of Stormwater Control Facilities
  - a) Bypass Not Exceeding Limitations.  
The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation or as part of a planned action specified in the approved Erosion and Sedimentation Control Permit. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.
  - b) Notice
    - i) Anticipated bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.
    - ii) Unanticipated bypass - The permittee shall submit notice to the Division contact (See Section VIII.) within 24 hours of the occurrence of an unanticipated bypass.
  - c) Prohibition of Bypass  
Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
    - i) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
    - ii) There were no feasible alternatives to the bypass, such as the use of auxiliary control facilities, retention of stormwater or maintenance during normal periods of equipment downtime or dry weather. This condition is not satisfied if adequate backup controls should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - iii) The permittee submitted notices as required under Paragraph b. of this section.
  - d) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Paragraph c. of this section.
- 4) Upsets
  - a) Definition - "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment or control facilities,



- inadequate treatment or control facilities, lack of preventive maintenance, or careless or improper operation.
- b) Effect of an Upset - An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph c. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
  - c) Conditions Necessary for a Demonstration of Upset - A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - i) An upset occurred and that the permittee can identify the cause(s) of the upset;
    - ii) The permitted facility was at the time being properly operated;
    - iii) The permittee submitted notice of the upset as required in this general permit, and,
    - iv) The permittee complied with any remedial measures required in this general permit.
  - d) Burden of Proof - In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- 5) Inspection and Entry - The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to:
- a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this general permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this general permit;
  - c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this general permit; and
  - d) Sample or monitor at reasonable times, for the purposes of assuring general permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

## SECTION V PERMIT ADMINISTRATION AND COMPLIANCE ISSUES

- 1) Time of compliance – Erosion and sedimentation control measures shall be maintained, and self-monitoring shall continue, after the completion of construction and development until the establishment of permanent ground cover sufficient to restrain erosion or until the financially responsible party has conveyed ownership or control of the tract of land for which the erosion and sedimentation control plan has been approved and the agency that approved the plan has been notified. If the financially responsible party has conveyed ownership or control of the tract of land for which the Erosion and Sedimentation Control Plan has been approved, the new owner or person in control shall conduct and document self-monitoring until the establishment of permanent ground cover sufficient to restrain erosion.

Upon establishment of permanent ground cover sufficient to restrain erosion, the permittee shall request an inspection by the permitting authority to verify the adequacy of the ground cover. Coverage under the permit shall end when a Sedimentation Inspection Report is issued documenting the final stabilization of the site with adequate permanent ground cover. The signed Sedimentation Inspection Report shall serve as a notice of termination.

- 2) Operation efficiency - During construction and until the completion of construction or development and the establishment of permanent stabilization, the permittee shall provide the operation and maintenance necessary to operate the storm water control measures and all erosion and sedimentation control measures at optimum efficiency.
- 3) Corrective action - If inspections required by this permit identify a need for maintenance of control measures, modifications or additions to control measures, or corrective actions to control sediment

or other pollutants these actions must be performed as soon as possible and before the next storm event to maintain the effectiveness of the control measures.

- 4) Duty to Comply - The permittee must comply with all conditions of this general permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; certificate of coverage termination, revocation and reissuance, or modification; or denial of a certificate of coverage upon renewal application.
  - a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b) The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$27,000 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
  - c) Under state law, a daily civil penalty of not more than twenty-five thousand dollars (\$25,000) per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [Ref: NC General Statute 143-215.6A].
  - d) Any person may be assessed an administrative penalty by the Administrator of the U.S. Environmental Protection Agency for violating section 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500. Penalties for Class II violations are not to exceed \$16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$177,500.
- 5) Duty to Mitigate - The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this general permit that has a reasonable likelihood of adversely affecting human health or the environment.

- 6) Civil and Criminal Liability - Except as provided in Section IV.3. of this permit regarding bypassing of stormwater control facilities, nothing in this general permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6A, 143-215.6B, 143-215.6C or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.
- 7) Oil and Hazardous Substance Liability - Nothing in this general permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USC 1321. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.
- 8) Property Rights - The issuance of this general permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- 9) Severability - The provisions of this general permit are severable, and if any provision of this general permit, or the application of any provision of this general permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this general permit, shall not be affected thereby.
- 10) Duty to Provide Information - The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the certificate of coverage issued pursuant to this general permit or to determine compliance with this general permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this general permit.
- 11) Signatory Requirements
  - a) All applications, reports, or information submitted to the Director shall be signed and certified as follows:
    - i) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
    - ii) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    - iii) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
  - b) All reports required by the general permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - i) The authorization is made in writing by a person described above;
    - ii) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the

company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

iii) The written authorization is submitted to the Director.

c) Any person signing a document under paragraphs a. or b. of this section shall make the following certification:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

- 12) Penalties for Tampering -The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this general permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
- 13) General Permit Modification, Revocation and Reissuance, or Termination - The issuance of this general permit does not prohibit the Director from reopening and modifying the general permit, revoking and reissuing the general permit, or terminating the general permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. seq.
- 14) Availability of Reports - Except for data determined to be confidential under NCGS 143-215.3(a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division of Water Quality. As required by the Act, discharge data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.6B or in Section 309 of the Federal Act.
- 15) Penalties for Falsification of Reports - The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both.
- 16) Anticipated Noncompliance - The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with the general permit requirements.
- 17) Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in any report to the Director, it shall promptly submit such facts or information.
- 18) Limitations Reopener - This general permit shall be modified or alternatively, revoked and reissued, to comply with any applicable effluent guideline or water quality standard issued or approved under Sections 302(b) (2) (c), and (d), 304(b) (2) and 307(a) of the Clean Water Act, if the effluent guideline or water quality standard so issued or approved:
  - a) contains different conditions or is otherwise more stringent than any effluent limitation in the general permit; or
  - b) controls any pollutant not limited in the general permit.
  - c) The general permit as modified or reissued under this paragraph shall also contain any other requirements in the Act then applicable.

**SECTION VI**  
**DISCHARGE MONITORING AND TURBIDITY LIMITATIONS**

This General Permit does not include requirements for numeric limits for discharges from construction sites. However, the next reissuance of this North Carolina Construction General Permit (NCG 01) is scheduled for five years from the date of approval of this permit and will contain effluent limitations as required in *Subpart B-Construction and Development Effluent Guidelines* of Part 450 of the Code of Federal Regulations.

**SECTION VII**  
**DEFINITIONS**

- 1) Act or "the Act" or CWA - The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.
- 2) Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operation procedures, and management practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- 3) Bypass - The intentional diversion of stormwater from any portion of a stormwater control facility.
- 4) Control Measures - Refers to any BMP or other structural or non-structural practices and procedures used to prevent or reduce the discharge of pollutants including practices to control erosion and sedimentation.
- 5) Director - The Director of the Division of Water Quality.
- 6) Division - The Division of Water Quality, Department of Environment, and Natural Resources.
- 7) EMC - The North Carolina Environmental Management Commission.
- 8) Erosion and Sedimentation Control Plan - A plan developed in compliance with the North Carolina Sedimentation Pollution Control Act of 1973 to prevent the erosion and deposition of sediment and other materials into the waters of the State from construction or other land-disturbing activities that disturb one or more acres of land. Each plan must be approved by the NC Sedimentation Control Commission or a program delegated by the Commission to a local government.
- 9) Ground cover - Any vegetative growth or other material which, when applied to the soil surface, renders the soil surface stable against accelerated erosion.
- 10) Normal Business Hours - These are generally considered to be between the hours of 6 a.m. and 6 p.m., or when workers are normally present on the construction site. Weekends and federal holidays are not considered normal business hours unless construction activities are taking place on the site during those times.
- 11) Permitting Authority - The permitting authority is the agency that issues the permit. The Division of Water Quality is the delegated NPDES permitting authority and issues this permit. However, some erosion and sedimentation control activities are performed by Division of Land Resources or the locally-delegated programs. Other activities may be shared by the two divisions and the local programs. The Land Quality Section of the Division of Land Resources and the Surface Water Protection Section of the Division of Water Quality maintain a Memorandum of Understanding that specifies specific roles of the two divisions and the local programs and will be used to assign specific control and oversight activities between the agencies.
- 12) Permanently Cease - When all or part of the land disturbing activity is complete and no additional alteration or disturbance of the land surface is planned prior to final stabilization.
- 13) Permanent Stabilization - When all soil disturbing activity is completed and exposed soils have been stabilized with a vegetative cover with a density of at least 80% or covered with a structural stabilization method. Permanent perennial vegetation may include the use of sod, shrubs and ground cover plants mixed with mulching, aggregate or other landscaping techniques. Structural methods include concrete, asphalt, retaining wall or other stabilization techniques.

- 14) Permittee -The person, firm or organizational entity that signed as the financially responsible party on the Erosion and Sedimentation Control Plan.
- 15) Point Source Discharge - Any discernible, confined and discrete conveyance, including but specifically not limited to, any pipe, ditch, channel, tunnel, conduit, discrete fissure, or container from which pollutants are or may be discharged to waters of the state.
- 16) Soil Stabilization - The use of vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.
- 17) Stormwater Pollution Prevention Plan (SWPPP) – The elements of the State’s stormwater pollution prevention program that provide the technology-based requirements designed to protect the state’s waters from the adverse impacts of sediments. In North Carolina, the combination of the NCG01 Construction General and the Erosion and Sedimentation Control Plan are considered the SWPPP. It should be noted that on sites that involve multiple or complex sources of pollution, the Division may require additional control measures as needed to assure that water quality is protected and these additional measures will also be considered part of the SWPPP.
- 18) Temporarily Cease - When all or part of the site that is and will remain unworked for a period of days but where site land disturbing activity is not complete and additional land disturbing activity is planned.
- 19) Temporary Stabilization – When the establishment of ground cover over all disturbed areas (such as mulching, rolled erosion control products, vegetation, or other material) renders the surface stable against accelerated erosion. Stabilization shall be achieved with the establishment of a uniform and evenly-distributed (i.e., without large bare areas) ground cover with a cover density of at least 80%.
- 20) Severe property damage – Substantial physical damage to property, damage to the control measures that cause them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

**SECTION VIII**  
**N.C. DIVISION OF WATER QUALITY CONTACTS**

**Asheville Regional Office**

2090 U.S. Highway 70  
Swannanoa, NC 28778  
828-296-4500  
FAX 828-299-7043

**Fayetteville Regional Office**

Systel Building,  
225 Green St., Suite 714  
Fayetteville, NC 28301-5094  
910-433-3300  
FAX 910-486-0707

**Mooresville Regional Office**

610 East Center Ave.  
Mooresville, NC 28115  
704-663-1699  
FAX 704-663-6040

**Winston-Salem Regional Office**

585 Waughtown Street  
Winston-Salem, NC 27107  
336-771-5000  
FAX 336-771-4630

**Washington Regional Office**

943 Washington Square Mall  
Washington, NC 27889  
252-946-6481  
FAX 252-975-3716

**Wilmington Regional Office**

127 Cardinal Drive Extension  
Wilmington, NC 28405  
910-796-7215  
FAX 910-350-2004

**Raleigh Regional Office**

3800 Barrett Drive  
Raleigh, NC 27609  
919-791-4200  
FAX 919-571-4718

**Raleigh Regional Office**

Mail to:  
1628 Mail Service Center  
Raleigh, NC 27699-1628

<b>Project Name</b>		<b>Land Quality or Local Program Project #</b>	
<b>Financially Responsible Party, (FRP) / Permittee INSPECTOR</b>		<b>County</b>	
<b>Inspector Type (Mark)</b>	<b>X</b>	<b>Employer</b>	
<b>FRP/Permittee</b>		<b>Address</b>	
<b>Agent/Designee</b>		<b>Phone Number</b>	
		<b>Email Address</b>	

**PART 1A: Rainfall Data**

Day / Date	Rain Amt (inches) Daily Rainfall Required, except for Holidays or Weekends. If no rain, indicate with a "zero"
M	
T	
W	
Th	
F	
Sat (Optional)	
Sun (Optional)	

**PART 1B: Current Phase of Project**

Phase of Grading check the applicable box(es)	
Installation of perimeter erosion and sediment control measures	<b>X</b>
Clearing and grubbing of existing ground cover	
Completion of any phase of grading of slopes or fills	
Installation of storm drainage facilities	
Completion of all land-disturbing activity, construction or development	
Permanent ground cover sufficient to restrain erosion has been established	

**PART 1C: Signature of Inspector**

By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.

<b>Financially Responsible Party / Permittee or Agent / Designee</b>	<b>Date</b>

**GROUND STABILIZATION TIMEFRAMES**

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales and slopes	7 Days	None
High Quality Water (HQW) Zones	7 Days	None
Slopes Steeper than 3:1	7 Days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 Days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 Days	None, except for perimeters and HQW Zones

\*For an editable copy of this form as a Word doc and other information, see <http://portal.ncdenr.org/web/ltr/erosion>

**PART 2A: EROSION AND SEDIMENTATION CONTROL MEASURES:** Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.

**Erosion and Sedimentation Control Measures Inspected**

Measure ID or Location and Description	Operating Properly? (Y/N)	Any Repair or Maintenance Needed? (Y/N)	New Measures Installed *		Inspection Date	Describe Actions Needed <u>Corrective actions should be performed as soon as possible and before the next storm event</u>	Date Corrected
			Proposed Dimensions (ft.)	Actual Dimensions (ft.)			

\*New erosion and sedimentation control measures installed since the last inspection should be documented here or by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan. List Dimensions of Measures such as Sediment Basins and Riprap Aprons.

**PART 2B: STORMWATER DISCHARGE OUTFALLS (SDOs):** SDOs must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.

**Stormwater Discharge Outfalls Inspected**

Stormwater Discharge Outfall ID or Location	Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N)	Any Increase in Stream Turbidity from Discharge? (Y/N)	Any Visible Erosion below SDO? (Y/N)	Any visible oil sheen, floating or suspended solids or discoloration? (Y/N)	Inspection Date	Report Visible Sedimentation to streams or wetlands to Land Quality within 24 Hours <a href="http://portal.ncdenr.org/web/lr/division-contacts">http://portal.ncdenr.org/web/lr/division-contacts</a> <b>Describe Actions Needed</b> <u>Corrective actions should be performed as soon as possible and before the next storm event</u>	Date Corrected

**PART 2C: GROUND STABILIZATION** Must be recorded after each Phase of Grading

Areas Where Land Disturbance Has Been Completed or Temporarily Stopped	Time Limit for Ground Cover 7 days or 14 days	Is Ground Cover Sufficient to Restrain Erosion? (Y/N)	Inspection Date	Describe Actions Needed	Date Corrected



ROY COOPER

Governor

MICHAEL S. REGAN

Secretary

S. DANIEL SMITH

Director



NORTH CAROLINA  
Environmental Quality

February 3, 2020

Mr. Donald V. Chamblee, P.E.  
Director of Public Works  
Lincoln County  
115 West Main Street  
Lincolnton, North Carolina 28092

**SUBJECT:** Authorization to Construct  
A to C No. 088722A03  
Lincoln County  
Killian Creek WWTP  
NPDES Permit No. NC0088722

Dear Mr. Chamblee:

A letter of request for an Authorization to Construct was received on September 23, 2019, by the Division of Water Resources (Division), and final plans and specifications for the subject project have been reviewed and found to be satisfactory. Authorization is hereby granted for the construction of modifications to the existing 3.35 MGD Killian Creek WWTP, with discharge of treated wastewater into Killian Creek in the Catawba River Basin.

This authorization results in an increase in design and permitted capacity to 6.6 MGD, and is awarded for the construction of the following specific modifications:

Installation of new headworks consisting of one (1) mechanical cylindrical bar screen system with inclined manual bypass screen rated for 8.4 MGD at peak hourly flow, one (1) grit removal system rated for 8.4 MGD at peak hourly flow consisting of one (1) vortex grit removal chamber with air scouring, one (1) grit air lift pumping system, one (1) grit washer/classifier and one (1) screw conveyor, one (1) influent parshall flume, one (1) new influent splitter box, piping and controls; installation of new phosphorous control chemical feeding system including one (1) 8,000 gallon chemical storage tank, one (1) 44 GPM at 22 ft TDH recirculation pump and three (3) 70 GPH at 60 PSI peristaltic chemical metering pumps with VFD, containment, piping and controls; installation of two (2) 1,814,100-gallon sequencing batch reactors (SBR) with jet aeration, including two (2) floating decanters, four (4) 60 HP, 6590 GPM at 19 TDH jet motive pumps, two (2) 700 GPM at 26 TDH submersible sludge wasting pumps, four (4) 1300 SCFM aeration blowers with VFDs, piping and controls; installation of one (1) 437,000 gallon post-equalization basin with four (4) 7.5 HP submersible mixers, five (5) 1150 GPM submersible pumps with VFD, piping and controls; construction of one (1) new



North Carolina Department of Environmental Quality | Division of Water Resources  
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617  
919.707.9000

Effluent Filter Building with two (2) effluent rotary disc filters, two (2) 10 HP centrifugal effluent filter backwash pumps, relocation of three (3) existing effluent disk filters with backwash pumps to new Effluent Filter Building, piping and controls; installation of two new (2) UV disinfection banks each rated for 4.2 MGD at peak hourly flow, piping and controls; installation of new aerobic sludge digestion system including one (1) 488,700 gallon aerobic digester with jet aeration, one (1) 640,000 gallon aerobic digester with jet aeration, one (1) 267,100 gallon sludge holding tank with jet aeration, one (1) 700 GPM at 26 TDH submersible sludge transfer pump, one (1) 700 GPM at 25 TDH submersible sludge transfer pump, one (1) 700 GPM at 24 TDH submersible sludge transfer pump, four (4) 2929 GPM at 19 TDH jet aeration submersible pumps, and four (4) 1300 SCFM aerobic digestion blowers, piping and controls; installation of one (1) new rotary drum thickener rated for 3,000 dry lbs per hour with polymer feed system, two (2) 400 GPM at 40 TDH centrifugal rotary drum thickener feed pumps with VFDs, one (1) 200 GPM at 30 PSI rotary lobe, rotary drum thickener discharge pump with VFD, one (1) 9 GPH at 100 PSI progressive cavity polymer feed pumps with VFD, piping and controls; installation of a new sludge pump station including one (1) 600 GPM sludge macerator, three (3) 120 GPM at 50 PSI rotary filter press feed pumps with VFDs, one (1) 44 GPM at 22 TDH caustic recirculation pump, five (5) 55 GPH at 60 PSI peristaltic caustic metering pumps with VFDs, piping and controls; installation of one (1) new sludge dewatering building including two (2) 9 GPH at 100 PSI progressive cavity polymer feed pumps with VFDs, two (2) new rotary sludge filter presses, each rated at 510 dry tons per hour, two (2) horizontal screw conveyors, one (1) inclined screw conveyor, piping and controls; in conformity with the project plans, specifications, and other supporting documentation comprising the ATC Permit Application package submitted to the Department of Environmental Quality.

This ATC is issued in accordance with Part III, Paragraph A of NPDES Permit No. NC0088722 issued effective February 3, 2020, and shall be subject to revocation unless the wastewater treatment facilities are constructed in accordance with the conditions and limitations specified in Permit No. NC0025984.

It is the Owner's responsibility to ensure that the as-constructed project meets the requirements of all applicable regulations and statutes, the ATC Permit Application package, and all of the requirements contained herein. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C.

The sludge generated from these treatment facilities must be disposed of in accordance with G.S. 143-215.1 and in a manner approved by the Division.

In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by the Division, such as the construction of additional or replacement wastewater treatment or disposal facilities.

The Mooresville Regional Office, telephone number (704) 663-1699, shall be notified at least forty-eight (48) hours in advance of operation of the installed facilities so that an on-site inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.

Upon completion of construction and prior to operation of this permitted facility, a certification must be received from a Professional Engineer certifying that the permitted facility has been installed in accordance with the NPDES Permit and the ATC Permit Application package. Mail the Certification to: Division of Water Resources, WQ Permitting – NPDES, 1617 Mail Service Center, Raleigh, NC 27699-1617.

Upon classification of the facility by the Certification Commission, the Permittee shall employ a certified wastewater treatment plant operator to be in responsible charge (ORC) of the wastewater treatment facilities. The operator must hold a certificate of the type and grade at least equivalent to or greater than the classification assigned to the wastewater treatment facilities by the Certification Commission.

The Permittee must also employ a certified back-up operator of the appropriate type and grade to comply with the conditions of T15A:8G.0202. The ORC of the facility must visit each Class I facility at least weekly and each Class II, III and IV facility at least daily, excluding weekends and holidays, must properly manage the facility, must document daily operation and maintenance of the facility, and must comply with all other conditions of T15A:8G.0202.

**A copy of the project plans and specifications shall be maintained on file by the Permittee for the life of the facility.**

During the construction of the proposed additions/modifications, the Permittee shall continue to properly maintain and operate the existing wastewater treatment facilities at all times, and in such a manner, as necessary to comply with the effluent limits specified in the NPDES Permit.


You are reminded that it is mandatory for the project to be constructed in accordance with the North Carolina Sedimentation Pollution Control Act, and when applicable, the North Carolina Dam Safety Act. In addition, the specifications must clearly state what the contractor's responsibilities shall be in complying with these Acts.

Prior to entering into any contract(s) for construction, the recipient must have obtained all applicable permits from the State.

The issuance of this ATC does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction.

If you have any questions or need additional information, please contact Nick Coco at telephone number (919) 707-3609.

Sincerely,

  
for S. Daniel Smith

Director, Division of Water Resources

With Engineer's Certificate attached:

cc: DWR Mooresville Regional Office, Water Quality Programs  
Central Files

ecopy: Charles R. Froneberger, P.E.

WK Dickson @ Co, Inc.

Email: [bfroneberger@wkdickson.com](mailto:bfroneberger@wkdickson.com)

NPDES File

Without Engineer's Certificate attached:

cc: Lincoln County Health  
Trupti Desai, DWI



**Commercial Plan Review Application**

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Parcel ID# 89400 / 3891-45-8075  
89400  
Permit # \_\_\_\_\_

19-05071

**APPLICANT INFORMATION**

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

**SITE INFORMATION**

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

**APPLICATION TYPE**

Description of Work (check all that apply):

- New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

**CONTRACTOR INFORMATION**

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

**STRUCTURE INFORMATION**

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B

Primary Occupancy: utility/misc.

Proposed use of structure: Effluent Filter Building

Fire Sprinklers:  Yes  No Heat Type:  Elec  LP  Nat'l Gas

# of Bath's: N/A # of stories: 1 Foundation:  Basement  Crawl  Slab

Heated Sq. Ft.: 2800 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 2800

Existing use of land: WWTP Acreage of lot/tract: 38.049

Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA

Building Height: 24' Width of lot at front of proposed building: NA

Water Supply:  Well  City  County Availability Fees Paid:  Yes  No

Doc 9/16

Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

PLEASE READ THE FOLLOWING BEFORE SIGNING:

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

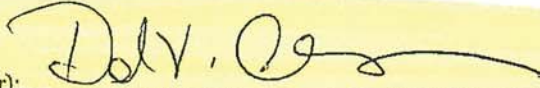
One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

Subcontractor's must pull separate permit for each trade.

\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\*

\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\*

Signature (owner/contractor):



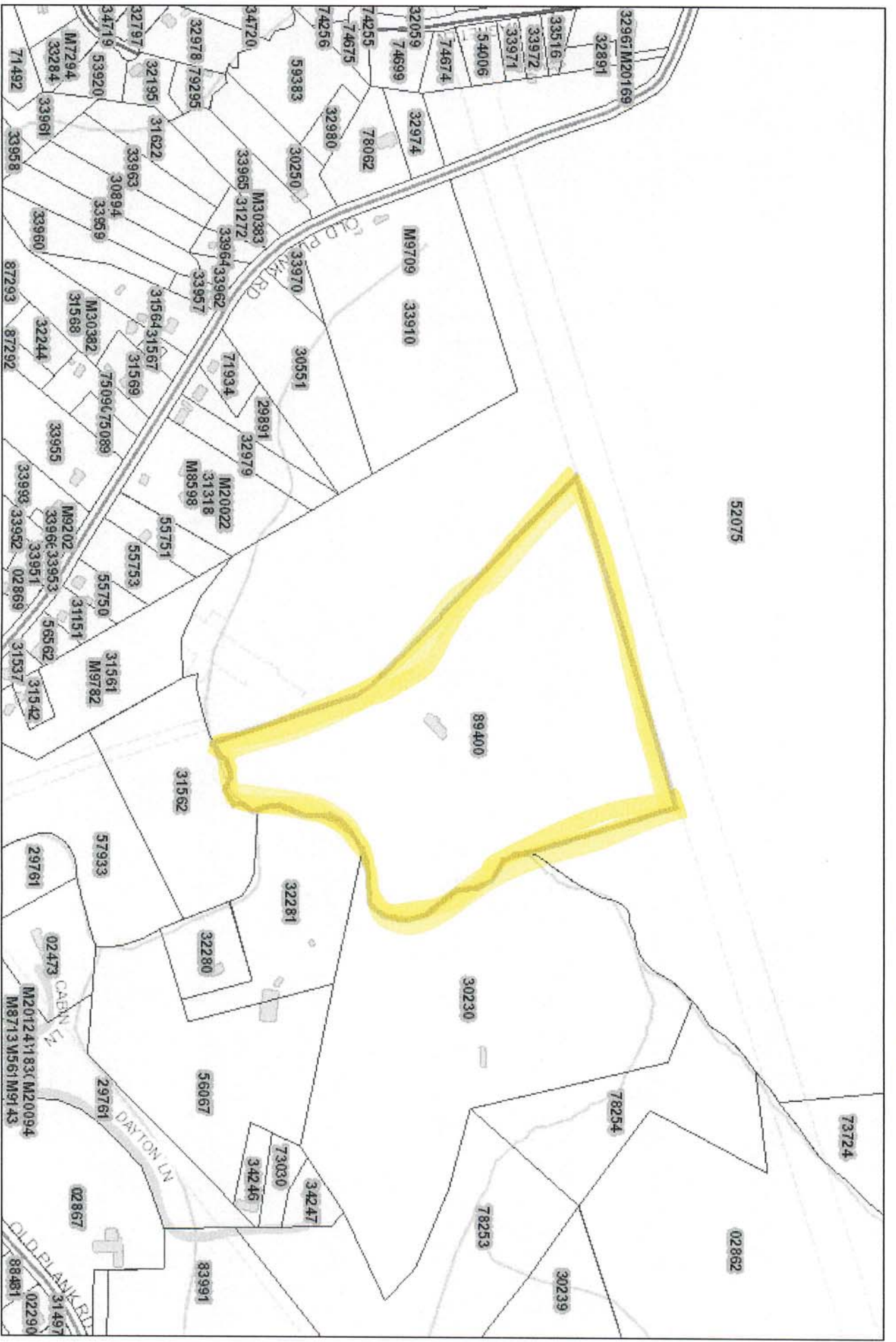
Print Name: Donald V. Chamblee (Lincoln County Public Works Director)

Date: 9/17/2019

Owner  General Contractor

DC 9/19

- 7085 Old Plank Road -



September 24, 2019

Esri, Inc., Lincoln County, NC

0 100 200 Feet

1 inch = 556 feet



# Commercial Plan Review Application

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Sludge Pump Building

Parcel ID# 89400/3691-45-6075  
Permit # 89400

19-050172

### APPLICANT INFORMATION

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

### SITE INFORMATION

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

### APPLICATION TYPE

Description of Work (check all that apply):

New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

### CONTRACTOR INFORMATION

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

### STRUCTURE INFORMATION

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B

Primary Occupancy: utility/misc.

Proposed use of structure: Sludge Pump Building

Fire Sprinklers:  Yes  No

Heat Type:  Elec  LP  Nat'l Gas

# of Bath's: N/A # of stories: 1

Foundation:  Basement  Crawl  Slab

Heated Sq. Ft.: 660 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 660

Existing use of land: WWTP Acreage of lot/tract: 38.049

Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA

Building Height: 12' Width of lot at front of proposed building: NA

Water Supply:  Well  City  County    Availability Fees Paid:  Yes  No

RECEIVED  
Waste Water Treatment Plant  
SEP 23 2019  
BY: E-mail  
Ryan Hager 10:38 AM

202 9/17



Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

**PLEASE READ THE FOLLOWING BEFORE SIGNING:**

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

**Subcontractor's must pull separate permit for each trade**

**\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\***

**\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\***

Signature (owner/contractor):



Print Name:

Donald V. Chamblee (Lincoln County Public Works Director)

Date:

9/17/2019

Owner  General Contractor

DC 9/19



# Commercial Plan Review Application

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Sludge Dewatering Building

Parcel ID# 89400/3691-45-6075  
Permit # 89400

19-05070

### APPLICANT INFORMATION

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

### SITE INFORMATION

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

### APPLICATION TYPE

Description of Work (check all that apply):  
 New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

### CONTRACTOR INFORMATION

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

### STRUCTURE INFORMATION

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B  
Primary Occupancy: utility/misc.  
Proposed use of structure: Sludge Dewatering Building  
Fire Sprinklers:  Yes  No    Heat Type:  Elec  LP  Nat'l Gas  
# of Bath's: N/A # of stories: 1    Foundation:  Basement  Crawl  Slab  
Heated Sq. Ft.: 2941 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 2941  
Existing use of land: WWTP Acreage of lot/tract: 38.049  
Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA  
Building Height: 24' Width of lot at front of proposed building: NA  
Water Supply:  Well  City  County    Availability Fees Paid:  Yes  No

JRC/17

Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

**PLEASE READ THE FOLLOWING BEFORE SIGNING:**

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

**Subcontractor's must pull separate permit for each trade.**

**\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\***

**\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\***

Signature (owner/contractor):



Print Name:

Donald V. Chamblee (Lincoln County Public Works Director)

Date:

9/17/2019

Owner  General Contractor

DC 9/19



**Commercial Plan Review Application**

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Rotary Drum Thickener

Parcel ID# 89400/3891-45-8075  
Permit # 89400

19-05069

**APPLICANT INFORMATION**

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

**SITE INFORMATION**

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

**APPLICATION TYPE**

Description of Work (check all that apply):  
 New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

**CONTRACTOR INFORMATION**

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

**STRUCTURE INFORMATION**

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B  
Primary Occupancy: utility/misc.  
Proposed use of structure: Rotary Drum Thickener Building  
Fire Sprinklers:  Yes  No    Heat Type:  Elec  LP  Nat'l Gas  
# of Bath's: N/A # of stories: 1    Foundation:  Basement  Crawl  Slab  
Heated Sq. Ft.: 857 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 857  
Existing use of land: WWTP Acreage of lot/tract: 38.049  
Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA  
Building Height: 25' Width of lot at front of proposed building: NA  
Water Supply:  Well  City  County    Availability Fees Paid:  Yes  No

Dec 9/17

Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

**PLEASE READ THE FOLLOWING BEFORE SIGNING:**

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

**Subcontractor's must pull separate permit for each trade.**

**\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\***

**\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\***

Signature (owner/contractor):



Print Name: Donald V. Chamblee (Lincoln County Public Works Director)

Date: 9/17/2019

Owner  General Contractor

DK 9/15



# Commercial Plan Review Application

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Blower Building

Parcel ID# 89400 / 3891-45-6075  
Permit # 89400

19-05068

### APPLICANT INFORMATION

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

### SITE INFORMATION

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

### APPLICATION TYPE

Description of Work (check all that apply):

- New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

### CONTRACTOR INFORMATION

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

### STRUCTURE INFORMATION

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B

Primary Occupancy: utility/misc.

Proposed use of structure: Blower Building

Fire Sprinklers:  Yes  No

Heat Type:  Elec  LP  Nat'l Gas

# of Bath's: N/A # of stories: 1

Foundation:  Basement  Crawl  Slab

Heated Sq. Ft.: 1509 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 1509

Existing use of land: WWTP Acreage of lot/tract: 38.049

Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA

Building Height: 22' Width of lot at front of proposed building: NA

Water Supply:  Well  City  County

Availability Fees Paid:  Yes  No

DV 9/17

Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

**PLEASE READ THE FOLLOWING BEFORE SIGNING:**

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

**Subcontractor's must pull separate permit for each trade.**

**\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\***

**\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\***

Signature (owner/contractor):



Print Name:

Donald V. Chamblee (Lincoln County Public Works Director)

Date:

9/17/2019

Owner  General Contractor

DC 9/19

Chemical Feed Building



**Commercial Plan Review Application**

Lincoln County Planning & Inspections  
302 N. Academy Street, Suite A, Lincolnton, NC 28092  
Phone: (704) 736-8725  
twells@lincolncounty.org

Parcel ID# 89400/3691-45-6075  
89400  
Permit # 19-0501d6

**APPLICANT INFORMATION**

Applicant Name: Lincoln County Phone #: 704-736-8495  
Email: dchamblee@lincolncounty.org  
Address: 115 W. Main St.  
City: Lincolnton State: NC Zip: 28092  
Land Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Structure Owner's Name (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_  
Occupant of Structure (if not same): \_\_\_\_\_ Phone #: \_\_\_\_\_

**SITE INFORMATION**

Project Name: Killian Creek WWTP Phase 3 Upgrade  
Address where structure is to be located: 7085 Old Plank Rd., Stanley, NC 28164  
Subdivision Name: N/A Lot #: \_\_\_\_\_

**APPLICATION TYPE**

Description of Work (check all that apply):  
 New Construction     Addition     Accessory Building     Upfit     Shell  
 Misc. \_\_\_\_\_ Comments: \_\_\_\_\_

Construction Cost for Structure (do not include cost of land): TBD upon public bidding and award

**CONTRACTOR INFORMATION**

General Contractor: TBD upon public bidding and award License #: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

**STRUCTURE INFORMATION**

Type of Construction:  I-A  I-B  II-A  II-B  III-A  III-B  IV  V-A  V-B  
Primary Occupancy: utility/misc.  
Proposed use of structure: Chemical Feed Building  
Fire Sprinklers:  Yes  No    Heat Type:  Elec  LP  Nat'l Gas  
# of Bath's: N/A # of stories: 1    Foundation:  Basement  Crawl  Slab  
Heated Sq. Ft.: 64 + Unheated Sq. Ft.: \_\_\_\_\_ = Total Sq. ft.: 64  
Existing use of land: WWTP Acreage of lot/tract: 38.049

Setbacks: Front (to right of way): NA Rear: NA Left: NA Right: NA

Building Height: 9' Width of lot at front of proposed building: NA

Water Supply:  Well  City  County    Availability Fees Paid:  Yes  No

JYC 9/11



Natural Resources

- This project requires an erosion control plan (will disturb 20,000 square feet of land or more), and a plan has submitted to Natural Resources.
- This project will disturb over 1,000 square feet of land during this construction project and Soil & Erosion Application attached
- This project will not disturb over 1,000 square feet of land.

**PLEASE READ THE FOLLOWING BEFORE SIGNING:**

By signing this application below, I certify that I am authorized to apply for plan review on this job, that the information given is true and complete to the best of my knowledge.

I certify that I have read the foregoing statement and that I accept responsibility for this project including any penalties assessed. I understand that all work is subject to inspection or testing at the Inspector's discretion and the field inspection has final authority. I further understand that it is my responsibility to meet all zoning setbacks and restrictions.

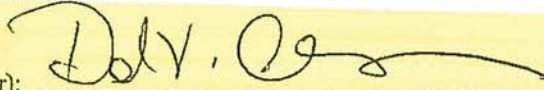
One (1) PDF complete sets of construction plans (including civil plans) must be submitted for review. Plans must include Appendix B - Building Summary & all mechanical, electrical, & plumbing. See Commercial Plan Review Process for full submittal requirements.

**Subcontractor's must pull separate permit for each trade.**

**\*\*\*\*\*Incomplete plans will not be accepted.\*\*\*\*\***

**\*\*\*\*\*Allow at least 21 days for the review of plans\*\*\*\*\***

Signature (owner/contractor):



Print Name:

Donald V. Chamblee (Lincoln County Public Works Director)

Date:

9/17/2019

Owner  General Contractor

DC 9/19

**APPENDIX D**  
**AFFIDAVIT OF WORKERS' COMPENSATION COVERAGE**  
**N.C.G.S. §87-14**

The undersigned applicant for Building Permit # \_\_\_\_\_ being the

Contractor: \_\_\_\_\_

Owner: \_\_\_\_\_

Officer/Agent of the Contractor or Owner: \_\_\_\_\_

Do hereby aver under penalties of perjury that the person(s), firm(s) or corporation(s) performing the work set forth in the permit:

\_\_\_\_\_ has/have three (3) or more employees and have obtained workers' compensation insurance to cover them,

\_\_\_\_\_ has/have one or more subcontractor(s) and have obtained workers' compensation insurance to cover them,

\_\_\_\_\_ has/have one or more subcontractor(s) who has/have their own policy of workmen's compensation covering themselves,

\_\_\_\_\_ has/have not more than two (2) employees and no subcontractors,

while working on the project for which this permit is sought. It is understood that the Inspection Department issuing the permit may require certificates of coverage of workers, compensation insurance prior to issuance of the permit and at any time during the permitted work from any person, firm or corporation carrying out the work.

Firm name: \_\_\_\_\_

By: \_\_\_\_\_

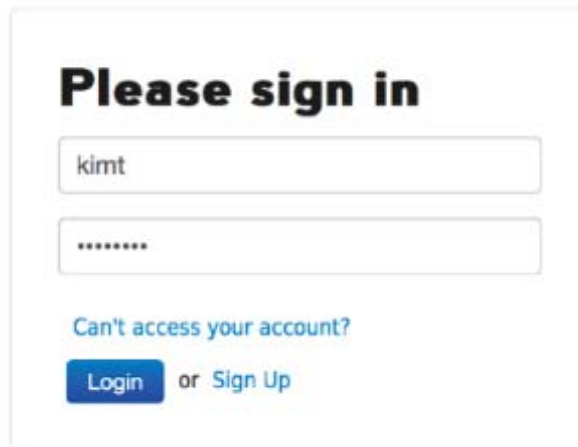
Title: \_\_\_\_\_

Date: \_\_\_\_\_

**NOTE:** All fields are optional unless otherwise indicated.

## **Step 1: Login**

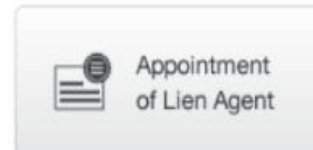
1. Click on the 'Login' link above.
2. If this is the first time using the system, click on the 'Sign Up' link and follow instructions to create an account.
3. Returning users can enter their login credentials and select the 'Login' button.
4. Returning users who cannot access their account should click on the 'Can't access your account?' link and follow the instructions.



**NOTE:** Please be aware, your password must include:

- *At least one capital letter*
- *At least one special character (ex: !, @, #, \$, %, etc.)*
- *At least one number*
- *At least 8 characters in length*

## **Step 2: File - Select Appointment of Lien Agent**



## **Step 3: Designate a Lien Agent**

From the drop-down menu, select your preferred Lien Agent. (If your preferred Lien Agent is not listed at the time of filing, you may want to contact them regarding their status with LiensNC.) However, it is not important which Lien Agent is selected. ➡ The screenshot to the right is a preliminary list.



**NOTE:** The selected Lien Agent will receive an automated notification from the system. There is no need for users to contact the Lien Agent directly or provide additional information.

## **Step 4: Property Type**

Choose the property type that best describes your project. (If not a 1-2 family dwelling, choose 'Other.')



**NOTE:** Be sure to confirm your property type selection before processing your payment; as this cannot be edited once submitted.

### **Step 5: Owner Information**

1. Enter the owner's first and last name.
2. Enter the owner's current street address, city, state, and zip.
3. Enter the owner's email address. (This address is used for informational purposes only. You must provide the owner's email address in the 'Filing Notification Alerts' section so that the owner will receive automated emails from the system relating to your project.)
4. Enter the owner's phone number.

<b>Owner Information</b>	
Name:	<input type="text"/> Required
Street 1:	<input type="text"/> Required
Street 2:	<input type="text"/>
City:	<input type="text"/> Required
State:	<input type="text" value="Select State:"/> Required
Zip:	<input type="text"/> Required
Email:	<input type="text"/>
Phone:	<input type="text"/> Required

### **Step 6: Contractor Information**

1. Enter the contractor's first and last name.
2. Enter the contractor's current street address, city, state, and zip.
3. Enter the contractor's email address. (This address is used for informational purposes only. Enter the contractor's email address in the 'Filing Notification Alerts' section if you would like for them to receive automated emails from the system relating to your project.)
4. Enter the contractor's phone number.

<b>Contractor Information</b>	
Name:	<input type="text"/>
Street 1:	<input type="text"/>
Street 2:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text" value="Select State:"/>
Zip:	<input type="text"/>
Email:	<input type="text"/>
Phone:	<input type="text"/>

### **Step 7: Project Property**

1. Provide the tax map, block and lot of the property, the street address, and/or the other legal description. (At least one is required.)
2. Enter the city and zip.
3. Enter the tax parcel ID. (If known)

**Project Property**

Tax Map, Block and Lot, Project Street Address, or Other Legal Description is Required.

Project Tax Map, Block, and Lot:

Tax Map:  Block:  Lot:

Street Address:

Other Legal Description:

Job name, subdivision, lot number, recorded instrument (Block and Page), common name of the project or other reference by which tract is commonly identified to contractors, subcontractors and suppliers

City:

Required

Zip:

Tax Parcel ID:

Can only contain numbers, letters and dashes (-) and spaces ( )

### **Step 8: Pre-Permit Workers**

Provide contact information regarding:

- Pre-permit Contractors (Provided work on the property prior to posting)
- Design Professionals (Architects, landscape architects, surveyors, and engineers)
- Contractors or Sub-Contractors who have not provided labor, materials or rental equipment at the site.

**NOTE:** You must provide the email addresses in the additional fields below of **all** design professionals listed.  
If no pre-permit workers have performed work on the site, state 'None.'

**Pre-Permit Workers**

Pre-permit contractors, design professionals, contractor or sub who has not provided labor at the site:

Must include name, address, phone, fax and email, of any architects, engineers, land surveyors, landscape architects, and contractors, subs or suppliers who provided labor to the site prior to posting of this appointment, and contractors, subs or suppliers already contracted but who have not furnished labor at the site. If none, state 'NONE' as your legal certification.

Required

Notification Alert Email:

[Add more...](#)

### **Step 9: Date of First Furnishing**

Enter the date of first improvements added or materials furnished.

**Date of First Furnishing**

Date first improvements added or materials furnished:

### **Step 10: Filing Notification Alerts**

Emails will be sent to the email addresses provided whenever anyone files against this property. (Example: owner, contractor, other interested party) To include additional email addresses in automated notifications, use the 'Track This' feature, which can be found on the project details page once this Appointment has been submitted.

#### Filing Notification Alerts

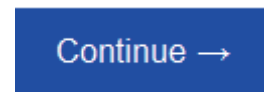
Emails will be sent to these optional email addresses whenever anyone files against this property.

Notification Email 1:

Notification Email 2:

Notification Email 3:

### **Step 11: Click on the Continue Button**



**NOTE:** You cannot edit this filing after submitting. Therefore, we suggest you carefully review the provided information.

### **Step 12: Review & Submit**

1. Review your Appointment to ensure all information is accurate. (After you submit, you will not be able to edit this posting.)
2. Edit the Appointment if you'd like to make any last minute revisions.
3. Click on the 'Pay Later' or 'Pay Now' button to submit this filing.

Pay Later - Adds the Appointment to your Cart so that you can process your payment for this filing (and any other filings previously placed in your cart) at your convenience.  
NOTE: This filing is not entered into the system until your payment is processed.

Pay Now - Takes you to the payment page, where you can provide your billing information and process the filing.



### Step 13: Review Cart or Process Payment

- If you elected to pay later, you will advance to the Cart page where you can pay for the selected filings.

**NOTE:** Unpaid filings are not entered into the system until payment is made.

Unpaid Filings									
Your Cart									
Selected	Filing Type	Filing Date	Project Property	Lien Agent	Potential Lien Claimant / Owner	Contractor	Pre-permit Workers	Filed By	Action
<input checked="" type="checkbox"/>	Appointment of Lien Agent		Lot 33 Any Subdivision Any Street Any City, NC 20000	Chicago Title Company, LLC	Owner, INC 755 CHARLES PLACE ANYTOWN, N. 27294 P. 516- 000-0000	OWNER Builder, INC 343 Barber Lane, Summerville, NC 28264	Design Professionals, INC 111 Main Street Happy City, NC 334-555-1230 Nancy.herguano@pct.com samroovers, LLC same as above Foundations Plus, Inc. same as above	test	Delete
<input checked="" type="checkbox"/>	Appointment of Lien Agent		Lot 33 Any Subdivision Any Street Any City, NC 00000	Chicago Title Company, LLC	Owner's Office Any City, NC 00000 P. 000-000-0000 E- ATTY1@ANY.COM			test	Delete

[Pay Now](#)

- If you elected to pay now, you will need to provide you payment and billing information to successfully process the transaction and complete the Appointment.

**NOTE:** You will need to enter your payment information and carefully review; as refunds cannot be made. Also, you must click on the 'Continue' button after the transaction is processed in order for your filing to be successfully submitted.

### Step 14: Post at Site

Once your Appointment is successfully submitted, you are required to post the project details at the job site.



To obtain this information, go to the History section of the site, click on the **BLUE ENTRY NUMBER** and then click on the 'Print Page' button.

A notice of the Appointment details will be sent to the email addresses provided in the Filing Notification Alerts section you listed on the Appointment of Lien Agent filing.

**THIS PRINTOUT IS WHAT YOU WILL NEED TO PROVIDE TO THE BUILDING PERMIT OFFICE AND POST AT THE JOB SITE.**

**NOTE:** The LiensNC contact information is provided at the bottom of the project details printout page.

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DOCUMENT 00 40 00

AFFIDAVIT OF COMPLIANCE WITH E-VERIFY REQUIREMENTS

The North Carolina State Legislature approved legislation requiring that all Lincoln County contracts include a provision that the contractor and the contractors' subcontractors comply with certain new laws in Chapter 64, Article 2 of the North Carolina General Statutes concerning using an E-verify system to verify its employees. Please sign the form below and submit with your bid.

\_\_\_\_\_<sup>1</sup>, being duly sworn, does hereby swear and aver as follows:

1. I am an adult, under no disability, and am authorized as this \_\_\_\_\_<sup>2</sup> to execute affidavit on behalf of the Company defined below.

2. I hereby warrant, affirm and represent that \_\_\_\_\_<sup>3</sup> (the "Company") is a \_\_\_\_\_<sup>4</sup>, and is properly authorized to do business in the State of North Carolina.

3. The Company has complied, does comply and at all times it is entered into a contract with Lincoln County will comply, to the extent applicable, with Article 2 of Chapter 64 of the North Carolina General Statutes.

4. The Company shall ensure than any subcontractors performing work for Company shall at all times comply with Article 2 of Chapter 64 of the North Carolina General Statutes.

5. Company, shall indemnify and hold Lincoln County harmless for any loss, cost or damages, including but not limited to attorney's fees and court costs, that it incurs or may incur as a result of the breach of any warranty contained herein.

\_\_\_\_\_(Name of Company)

By: \_\_\_\_\_(SEAL)

Name and position of signer

Date: \_\_\_\_\_

\_\_\_\_\_

<sup>1</sup> Name of individual

<sup>2</sup> Position of the individual signing the affidavit

<sup>3</sup> State of incorporation/organization

<sup>4</sup> Form of organization (corporation, limited liability company, etc.)

NORTH CAROLINA

\_\_\_\_\_ COUNTY

I, \_\_\_\_\_, a Notary Public for said County and State, do hereby certify that \_\_\_\_\_, personally appeared before me this day and acknowledged that he/she is the \_\_\_\_\_ of \_\_\_\_\_, \_\_\_\_\_, a \_\_\_\_\_ and acknowledged, on behalf of said Company, the due execution of this instrument. Witness my hand and notarial seal, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_

Notary Public

My Commission Expires: \_\_\_\_\_

DOCUMENT 00 41 10  
**IRAN DIVESTMENT ACT**

**(In Accordance with N.C.G.S. 143C-6A-1 to 6A-9 effective February 26, 2016)**

**The vendor certification requirement under the Iran Divestment Act was eliminated, effective October 1, 2017!**

Governor Cooper signed legislation into law on Thursday, July 27<sup>th</sup>, 2017 repealing the statute requiring that every State contract, and the contracts with any of its sub-units or with local government entities, include a contractor certification that the contractor is not on the list of entities doing business with Iran that is maintained by the Office of the State Treasurer. **The prohibition itself, however, remains in effect.**

In the future, North Carolina Dept. of Administration, Division of Purchase & Contract will post new solicitation templates with the certification requirement removed.

Note that the prohibition against contracting with vendors on the Treasurer's list remains in effect, even if a certification of that fact will no longer be needed. Each purchaser should download a copy of the list from the Treasurer's web site and check it before making any award recommendation, to make sure your selected vendor is not on the list, which would make your contract void. The Treasurer's list is updated every three months.

The list of prohibited vendors can be downloaded from:

<https://www.nctreasurer.com/inside-the-department/OpenGovernment/Pages/Iran-Divestment-Act-Resources.aspx>.

Remember to download both the *Final Divestment List* and the *Parent and Subsidiary List* from this page. Most of the companies on these lists are oil and petrochemical companies located in China or India.

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**BID FORM**

Lincoln County, North Carolina  
Killian Creek WWTP Phase 3 Upgrade  
WKD Project No. 20170294.00.CL

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**ARTICLE 1 – BID RECIPIENT**

1.01 This Bid is submitted to:

**Lincoln County  
John Henry, Purchasing Agent  
353 N. Generals Blvd.  
Executive Conference Room  
Lincolnton, NC 28092**

**The outer most packaging must be marked RFB 2020-0402 Killian Creek WWTP Phase 3 Upgrade.**

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 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 150 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if

any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. 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 any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. 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.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

4.01 Bidder certifies that:

- A. 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;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - 2. "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;

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.

**ARTICLE 5 – BASIS OF BID**

Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

5.01 Lump Sum Bid Price for Base Bid:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
 (Words) (Numbers)

5.02 Unit Cost Items:

Bidder is to include the following unit cost items.

Item No.	Item Description	Unit	Unit Quantity	Unit Price	Total Bid Price
1	Excavation and Offsite Disposal of Rock Material	CY	5,000	\$ _____	\$ _____

5.03 Subtotal Base Bid (Lump Sum Bid Price and Unit Cost Items):

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
 (Words) (Numbers)

5.04 Contingency Allowance:

All bidders shall include in the bid a General Construction Contingency Allowance per Section 01 20 00 in the amount of 5% of the Subtotal Base Bid.

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
 (Words) (Numbers)



5.05 Total Base Bid (Lump Sum, Unit Cost Items and Contingency Allowance):

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
(Words) (Numbers)

5.06 In connection with the bid for Owner preferred major equipment and products as listed in Schedule A and to be furnished and installed at the Owner's option for the listed additional cost, the bidder expressly agrees to the provisions of Section 7C-200 2013 Instructions to Bidders and to the following:

- A. That Bidders will provide an additive or deductive price for the substitution of the listed "Base Bid" major equipment or products with "Alternative" Owner Preferred major equipment or products in the spaces provided if any.
- B. That all equipment prices stated in Schedule A include the preparation and submittal of detailed shop drawings showing all modifications, if any, to the Contract Drawings necessary to accommodate such equipment or products and furthermore that the installed costs stated include all items for a complete operating installation.
- C. That all proposed major equipment or products listed in Schedule A "Base Bid" are of equal quality and function to the identified Owner Preferred "Alternative" major equipment and products and will perform satisfactorily and continuously.
- D. That, if awarded a contract on this project, all equipment items or products are guaranteed by the Bidder and his Surety to meet the performance requirements of the Contract Documents.

**SCHEDULE A. TABULATION OF MAJOR EQUIPMENT ITEMS AND PRODUCTS**

Specification	Description	Base Bid Equipment or Products Mfg.	“Alternative” Owner Preferred Equip. or Product Mfg	Addition/ Deduct to Base Bid Price for “Alternative Owner Preferred Equip. or Product”
26 45 00	SCADA System Modifications		Dorsett Technologies	\$_____
40 92 13.13	Electric Motor Actuators		EIM	\$_____
43 12 19	Positive Displacement Blower Assemblies		Excelsior	\$_____
43 21 13	Centrifugal Chemical Pumps		Finish Thompson, Inc	\$_____
43 21 36	Rotary Lobe Pumps		Borger	\$_____
43 21 39	Submersible Pumps in SBR, Digester, and Sludge Holding, Exclusive of Jet Aeration Pumps		Wilo	\$_____
43 21 39	Submersible Pumps in Post Equalization Basin		Xylem, Flygt	\$_____
43 32 63	Ultraviolet (UV) Disinfection Equipment		Xylem, Wedeco	\$_____
44 42 39	Preliminary Treatment Equipment		Lakeside Equip Corp	\$_____
44 46 10	SBR & Digester Equipment Including Jet Aeration Pumps		Evoqua	\$_____

<b>SCHEDULE A. TABULATION OF MAJOR EQUIPMENT ITEMS AND PRODUCTS</b>				
Specification	Description	Base Bid Equipment or Products Mfg.	“Alternative” Owner Preferred Equip. or Product Mfg	Addition/ Deduct to Base Bid Price for “Alternative Owner Preferred Equip. or Product”
44 46 16	Rotary Sludge Press Equipment & Conveyors		Fournier	\$ _____
46 33 33	Polymer Blending & Feed Equipment		Excell Feeders, Inc.	\$ _____
46 41 23	Submersible Mixers in Post Equalization Basin		Xylem, Flygt	\$ _____
46 61 46	Automatic Backwash Disc Filter Equipment		Kruger	\$ _____

**ARTICLE 6 – BASIS OF AWARD**

6.01 Award will be made to the lowest TOTAL BASE BID, Unit Price Items, and Contingency after consideration of the Owner preferred equipment listed within Schedule A, as selected by the OWNER based upon available funding and what is in the best interest of the OWNER.

**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 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 8 – ATTACHMENTS TO THIS BID**

8.01 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 Product Manufacturers;
- D. Affidavit of Compliance with E-Verify Requirements – Section 00 40 00;

- E. Qualifications Statement – EJCDC C-451;
- F. MBE/WBE (DBE) Good Faith Efforts Form (2 pages)
- G. MBE/WBE (DBE) Table A

**ARTICLE 9 – DEFINED TERMS**

- 9.01 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 10 – BID SUBMITTAL**

BIDDER: *[Indicate correct name of bidding entity]*

By:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

Title: \_\_\_\_\_

Submittal Date: \_\_\_\_\_

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Contact Name and e-mail address: \_\_\_\_\_

\_\_\_\_\_

Bidder's License No.: \_\_\_\_\_

*(where applicable)*

**List of Proposed Subcontractors by Trade:**

Note: Per NC [GS 143-128\(d\)](#), Single-prime contracts. – All bidders in a single-prime project shall identify on their bid the contractors they have selected for the subdivision or branches of work for:

Subdivision/Branch of Work to be Performed	Subcontractor Name	License No.	<a href="#">Classification</a> (H/S/PU)
HVAC, ventilating and air conditioning;			
Plumbing;			
Electrical; and			
General (work not listed in above categories):			



### BID BOND

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

---

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

**Lincoln County**  
115 West Main Street  
Lincolnton, NC 28092

BID

Bid Due Date:

Description: Killian Creek WWTP Upgrade Phase 3, 7085 Old Plank Road, Stanley, NC

BOND

Bond Number:

Date:

Penal sum Five Percent of Bid Amount \$ 5%  
(Words) (Figures)

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

**BIDDER**

**SURETY**

\_\_\_\_\_  
Bidder's Name and Corporate Seal (Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal (Seal)

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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





PENAL SUM FORM

length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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# QUALIFICATIONS STATEMENT

Prepared by



Issued and Published Jointly by



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1420 King Street, Alexandria, VA 22314-2794  
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## QUALIFICATIONS STATEMENT

**THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS**

**1. SUBMITTED BY:**

Official Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**2. SUBMITTED TO:**

Lincoln County

**3. SUBMITTED FOR:**

Killian Creek WWTP Upgrade Phase 3

Owner:

Lincoln County

Project Name:

Killian Creek WWTP Upgrade Phase 3

WKD Project #20170294.00.CL  
\_\_\_\_\_  
\_\_\_\_\_

**TYPE OF WORK:**

General Contractor for the WWTP Upgrades Phase 3  
\_\_\_\_\_  
\_\_\_\_\_

**4. CONTRACTOR'S CONTACT INFORMATION**

Contact Person: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**5. AFFILIATED COMPANIES:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**6. TYPE OF ORGANIZATION:**

SOLE PROPRIETORSHIP

Name of Owner: \_\_\_\_\_

Doing Business As: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

PARTNERSHIP

Date of Organization: \_\_\_\_\_

Type of Partnership: \_\_\_\_\_

Name of General Partner(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

CORPORATION

State of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Executive Officers:

- President: \_\_\_\_\_

- Vice President(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- Treasurer: \_\_\_\_\_

- Secretary: \_\_\_\_\_

LIMITED LIABILITY COMPANY

State of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Members: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

JOINT VENTURE

Sate of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Form of Organization: \_\_\_\_\_

Joint Venture Managing Partner

- Name: \_\_\_\_\_

- Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

- Name: \_\_\_\_\_

- Address: \_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

- Name: \_\_\_\_\_

- Address: \_\_\_\_\_  
\_\_\_\_\_

**7. LICENSING**

Jurisdiction: \_\_\_\_\_

Type of License: \_\_\_\_\_

License Number: \_\_\_\_\_

Jurisdiction: \_\_\_\_\_

Type of License: \_\_\_\_\_

License Number: \_\_\_\_\_

**8. CERTIFICATIONS**

CERTIFIED BY:

Disadvantage Business Enterprise: \_\_\_\_\_

Minority Business Enterprise: \_\_\_\_\_

Woman Owned Enterprise: \_\_\_\_\_

Small Business Enterprise: \_\_\_\_\_

Other ( \_\_\_\_\_ ): \_\_\_\_\_

**9. BONDING INFORMATION**

Bonding Company: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Bonding Agent: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_



Phone: \_\_\_\_\_

Aggregate Bonding Capacity: \_\_\_\_\_

Available Bonding Capacity as of date of this submittal: \_\_\_\_\_

**10. FINANCIAL INFORMATION**

Financial Institution: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Account Manager: \_\_\_\_\_

Phone: \_\_\_\_\_

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE  
LAST 3 YEARS

**11. CONSTRUCTION EXPERIENCE:**

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

**12. SAFETY PROGRAM:**

Name of Contractor's Safety Officer: \_\_\_\_\_

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

Total number of man-hours worked for the last 5 Years:

YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____

**13. EQUIPMENT:**

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HERewith, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATED: \_\_\_\_\_

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_

NOTARY PUBLIC - STATE OF \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

## SCHEDULE A

### CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

## SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

## SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE





---

**NOTICE OF AWARD**

---

Date of Issuance:

Owner: Lincoln County, North Carolina      Owner's Contract No.:

Engineer: W.K. Dickson & Co., Inc.      Engineer's Project No.: #20170294.00.CL

Project: Killian Creek WWTP Upgrade Phase 3 Contract Name:

Bidder:

Bidder's Address:

**TO BIDDER:**

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

Killian Creek WWTP Upgrade Phase 3

The Contract Price of the awarded Contract is: \$ \_\_\_\_\_

\_\_\_\_\_ copies of the Contract Documents (except Drawings) accompany this Notice of Award.

\_\_\_\_\_ copies of the Contract Drawings will be delivered separately or otherwise made available to you immediately.

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

1. Deliver to Owner 3 counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [*e.g., performance and payment bonds*] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

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

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

---

Owner: Lincoln County, North Carolina	Contractor:
Authorized Signature	Authorized Signature
By: _____	By: _____
Title: _____	Title: _____

Copy: Engineer

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

THIS AGREEMENT is by and between Lincoln County, North Carolina (“Owner”) and \_\_\_\_\_ (“Contractor”).

Owner and Contractor hereby agree as follows:

**ARTICLE 1 – WORK**

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

**ARTICLE 2 – THE PROJECT**

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Killian Creek WWTP Upgrade Phase 3

**ARTICLE 3 – ENGINEER**

3.01 The part of the Project that pertains to the Work has been designed by W.K. Dickson & Co., Inc.

3.02 The Owner has retained W.K. Dickson & Co., Inc. (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

**ARTICLE 4 – CONTRACT TIMES**

4.01 *Time of the Essence*

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: Dates*

A. The Work will be substantially completed within 510 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 540 calendar days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the

actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner \$1,500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$750 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

#### **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, a total amount included within the lump sum and unit price work and contingency of: \$\_\_\_\_\_.

#### **ARTICLE 6 – PAYMENT PROCEDURES**

##### 6.01 *Submittal and Processing of Payments*

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

##### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20<sup>th</sup> day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
  1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
    - a. Ninety-Five (95) percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

- b. Ninety-Five (95) percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, 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 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 in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

### **ARTICLE 7 – INTEREST**

- 7.01 All amounts not paid when due shall bear interest at the rate of 8.0 percent per annum.

### **ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS**

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
  - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
  - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies,

or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## ARTICLE 9 – CONTRACT DOCUMENTS

### 9.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 1 to 7, inclusive).
  - 2. Performance bond (pages 1 to 3, inclusive).
  - 3. Payment bond (pages 1 to 3, inclusive).
  - 4. General Conditions (pages 1 to 65, inclusive).
  - 5. Supplementary Conditions (pages 1 to 14, inclusive).
  - 6. Engineer's Supplementary Conditions (pages 1 to 12, inclusive).
  - 7. Specifications as listed in the table of contents of the Project Manual.
  - 8. Drawings (not attached but incorporated by reference) consisting of 74 sheets with each sheet bearing the following general title: Killian Creek Phase 3 Upgrade, Final Drawings-For Review Purposes Only-Not Released for Construction, dated September 2018.
  - 9. Addenda (N/A).
  - 10. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid (pages 1 to 8, inclusive).
    - b. Documentation submitted by Contractor to Notice of Award (page 1 to 1, inclusive).
    - c. Affidavit of Compliance (E-Verify).
    - d. Iran Divestment Act.
    - e. MBE Documents w/Lincoln County Resolution (pages X to X, inclusive).
    - f. Qualification Statements (pages 1 to 12, inclusive).
    - g. Notice of Award C-510, (pages 1 to 1, inclusive).
    - h. Certificate of Insurance provided by General Contractor

- i. Tax Statement and Certifications (pages 1 to 2, inclusive).
  - j. Certificate of Substantial Completion (page 1 to 1, inclusive).
  - k. Geotechnical Report, titled "Report of Subsurface Exploration and Geotechnical Engineering Evaluation", dated September 29, 2018, 61 pages.
  - l. NCDEQ Erosion Control Permit No. LINCO-2019-007, 24 pages.
  - m. NCDEQ ATC No. 088722A03, 4 pages.
11. 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.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

## **ARTICLE 10 – MISCELLANEOUS**

### **10.01 Terms**

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

### **10.02 Assignment of Contract**

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

### **10.03 Successors and Assigns**

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

### **10.04 Severability**

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

and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

#### 10.05 *Contractor's Certifications*

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

#### 10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.
1. *Performance Requirements and Damages. In some cases the construction contract will contain performance requirements that must be met by the equipment, systems, or facilities constructed or furnished by Contractor. The Owner's remedies for Contractor's failure to meet the performance requirements may include rejection of the items in question; correction remedies; exercise of warranty rights; and acceptance of the underperforming items coupled with a reduction in Contract Price or imposition of damages to compensate Owner for not receiving its full contractual entitlement. Typical damages might be for reduced production or treatment, or for the costs of increased electricity or chemical consumption over the life of the equipment. On some projects the Owner and Contractor may contractually stipulate specific damages that will be owed in the event of specific levels of underperformance. It is important when drafting such provisions to clarify whether the availability of underperformance damages is meant to close off other potential remedies. Most commonly performance provisions (and any stipulated damages amounts) will be located in the Specifications. It may be useful to provide a cross-reference to such provisions here in the Agreement, or in some cases*



*to state the stipulated damages amounts here because of their importance to the pricing of the Contract, which is one of the primary subjects of the Agreement.*

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

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

OWNER:

CONTRACTOR:

Lincoln County, North Carolina

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

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

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

Lincoln County

115 West Main Street

Lincolnton, NC 28092

License No.: \_\_\_\_\_  
*(where applicable)*

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

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

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**NOTICE TO PROCEED**

Owner:	Lincoln County, North Carolina	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	W.K. Dickson & Co., Inc.	Engineer's Project No.:	#20170294.00.CL
Project:	Kilian Creek WWTP Upgrade Phase 3	Contract Name:	
		Effective Date of Contract:	

**TO CONTRACTOR:**

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [REDACTED], 20[REDACTED]. [see Paragraph 4.01 of the General Conditions]

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is \_\_\_\_\_, and the date of readiness for final payment is \_\_\_\_\_] **or** [the number of days to achieve Substantial Completion is \_\_\_\_\_, and the number of days to achieve readiness for final payment is \_\_\_\_\_].

Before starting any Work at the Site, Contractor must comply with the following:  
*[Note any access limitations, security procedures, or other restrictions]*

Owner:	Lincoln County, North Carolina	Contractor:	
	Authorized Signature	Authorized Contractor:	
By:	_____	By:	_____
Title:	_____	Title:	_____
Date Issued:	_____		

Copy: Engineer

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## PERFORMANCE BOND

CONTRACTOR *(name and address)*:

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

OWNER *(name and address)*:

Lincoln County  
115 West Main Street  
Lincolnton, NC 28092

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*: Killian Creek WWTP Upgrade Phase 3

### BOND

Bond Number:

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

Amount:

Modifications to this Bond Form:  None  See Paragraph 16

---

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

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal *(seal)*

\_\_\_\_\_  
Surety's Name and Corporate Seal *(seal)*

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### 14. Definitions

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

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

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

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

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

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

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

16. Modifications to this Bond are as follows:

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## PAYMENT BOND

CONTRACTOR *(name and address)*:

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

OWNER *(name and address)*: Lincoln County, 115 West Main Street, Lincolnton, NC 28092

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*: Killian Creek WWTP Upgrade Phase 3

### BOND

Bond Number:

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

Amount:

Modifications to this Bond Form:  None  See Paragraph 18

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

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal

\_\_\_\_\_  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

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

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DOCUMENT 00 61 16  
CONTRACTOR'S AFFIDAVIT RELATED TO LIENS AND CLAIMS

STATE OF NORTH CAROLINA  
COUNTY OF LINCOLN

On this day, \_\_\_\_\_, being duly sworn, deposes and says that he is the \_\_\_\_\_ of \_\_\_\_\_ (Contractor) who entered into a contract, Killian Creek WWTP Upgrade Phase 3 dated \_\_\_\_\_, with Lincoln County (Owner) for furnishing materials and labor in the erection and construction of facilities defined in the Contract Documents, such erection and construction having been completed.

Further, that in accordance with the Contract Documents and applicable Statutes of the State of North Carolina the undersigned hereby declares that the claims of all subcontractors, materialmen, laborers, and all other persons and parties furnishing labor and materials with respect to the above mentioned Contract have been paid in full except as follows:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Affiant further states that, by execution of this affidavit, he agrees to indemnify and save harmless the Owner from any liability for payment of said deficiencies in the stated amounts or any part thereof.

\_\_\_\_\_  
Contractor

Subscribed and sworn to before me

this \_\_\_\_\_ day \_\_\_\_\_ of, 20\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

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DOCUMENT 00 62 76  
TAX STATEMENTS AND CERTIFICATIONS

NORTH CAROLINA  
TAX STATEMENT AND CERTIFICATION

This is to certify that the foregoing or attached statements are a true and complete statement of all State and County Sales or Use Tax paid by the undersigned Contractor from \_\_\_\_\_, 20 \_\_\_\_, to \_\_\_\_\_, 20 \_\_\_\_, inclusive for the materials and equipment that were or will become a part of the construction of the

\_\_\_\_\_  
Killian Creek WWTP Upgrade  
\_\_\_\_\_

(THE FOLLOWING PORTION TO BE FILLED OUT BY GENERAL CONTRACTOR ONLY)

It is further certified that

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

are all of the subcontractors that are, or were engaged by this Contractor in the performance of this contract and whose tax statements are also enclosed herewith.

\_\_\_\_\_  
CONTRACTOR OR SUBCONTRACTOR

Sworn and subscribed before me

This \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires:

\_\_\_\_\_

DOCUMENT 00 62 76  
STATE AND COUNTY SALES/USE TAX STATEMENT

Contractor's (or Subcontractor's) Name: \_\_\_\_\_

Project: \_\_\_\_\_

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

INVOICE	INVOICE DATES FROM _____ TO _____	VENDOR'S NAME	TYPE OF MATERIAL	TOTAL AMOUNT OF INVOICE	SALES/USE TAX	
					STATE	COUNTY

Subtotal this Page \_\_\_\_\_

Total all Invoices \_\_\_\_\_



DOCUMENT 00 62 79  
MATERIAL INVENTORY STATEMENT

Project:     **Killian Creek WWTP Upgrade**    

Date: \_\_\_\_\_

DESCRIPTION	ON HAND PREVIOUS ESTIMATE	DELIVERED THIS MONTH	GROSS	INCORPORATED IN WORK	ON HAND THIS ESTIMATE

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**CERTIFICATE OF SUBSTANTIAL COMPLETION**

Owner: Lincoln County, North Carolina  
 Contractor:  
 Engineer: W.K. Dickson & Co., Inc.  
 Project: Killian Creek WWTP Upgrade Phase 3

Owner's Contract No.:  
 Contractor's Project No.:  
 Engineer's Project No.: #20170294.00.CL  
 Contract Name:

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

- All Work  The following specified portions of the Work:

**Date of Substantial Completion**

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

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

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

Amendments to Owner's responsibilities:  None  
 As follows

Amendments to Contractor's responsibilities:  None  
 As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

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.

<b>EXECUTED BY ENGINEER:</b>  By: _____ (Authorized signature)  Title: _____  Date: _____	<b>RECEIVED:</b>  By: _____ Owner (Authorized Signature)  Title: _____  Date: _____	<b>RECEIVED:</b>  By: _____ Contractor (Authorized Signature)  Title: _____  Date: _____
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This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



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## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

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

regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and

submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the

result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

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



2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2 – PRELIMINARY MATTERS

### 2.01 *Delivery of Bonds and Evidence of Insurance*

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

### 2.02 *Copies of Documents*

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

### 2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Initial Acceptance of Schedules*

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

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

### **ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

#### **3.01 *Intent***

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

#### **3.02 *Reference Standards***

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

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies:*

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

#### B. *Resolving Discrepancies:*

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

### 3.04 *Requirements of the Contract Documents*

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

Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

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

### 3.05 *Reuse of Documents*

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

## **ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

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

### 4.02 *Starting the Work*

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

### 4.03 *Reference Points*

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

requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

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

#### 4.05 *Delays in Contractor's Progress*

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

that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.

- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

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

### *5.01 Availability of Lands*

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

### *5.02 Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise;

(b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

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

### 5.03 *Subsurface and Physical Conditions*

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



procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

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

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or

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

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

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
    - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;

- c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
- 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
    - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
    - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
    - d. Contractor gave the notice required in Paragraph 5.05.B.

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

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
  2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
  1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required

by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this

Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6 – BONDS AND INSURANCE**

### **6.01 *Performance, Payment, and Other Bonds***

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

### **6.02 *Insurance—General Provisions***

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or

authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

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

6.03 *Contractor's Insurance*

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



8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
  2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
  5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

#### 6.04 *Owner's Liability Insurance*

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

#### 6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
  1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
  2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available

under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.

3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
  4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
  5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
  6. extend to cover damage or loss to insured property while in transit.
  7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
  8. allow for the waiver of the insurer's subrogation rights, as set forth below.
  9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
  10. not include a co-insurance clause.
  11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
  12. include performance/hot testing and start-up.
  13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will

provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.

- E. *Additional Insurance*: If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

#### 6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of

payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.

- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

**6.07** *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

**ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES**

**7.01** *Supervision and Superintendence*

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

**7.02** *Labor; Working Hours*

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

- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

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

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that:
      - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

- 3) it has a proven record of performance and availability of responsive service;  
and
  - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times;  
and
  - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

#### 7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

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



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

7.06 *Concerning Subcontractors, Suppliers, and Others*

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

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

7.07 *Patent Fees and Royalties*

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

identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

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

#### 7.08 *Permits*

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

#### 7.09 *Taxes*

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

#### 7.10 *Laws and Regulations*

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

resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

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

7.12 *Safety and Protection*

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

employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

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

#### 7.13 *Safety Representative*

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

#### 7.14 *Hazard Communication Programs*

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

#### 7.15 *Emergencies*

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

#### 7.16 *Shop Drawings, Samples, and Other Submittals*

##### A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
  - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
  2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
  3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
  2. *Samples:*
    - a. Contractor shall submit the number of Samples required in the Specifications.
    - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
  5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
  6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
  7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
  8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.
- E. *Resubmittal Procedures:*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
  2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
  3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

#### 7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

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

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any



limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
  - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

## **ARTICLE 8 – OTHER WORK AT THE SITE**

### 8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner

may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

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

#### 8.02 *Coordination*

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

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor

must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

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

## **ARTICLE 9 – OWNER'S RESPONSIBILITIES**

### **9.01 *Communications to Contractor***

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

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

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

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

9.06 *Insurance*

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

9.07 *Change Orders*

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

9.08 *Inspections, Tests, and Approvals*

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

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

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

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

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

**ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

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

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

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

10.06 *Determinations for Unit Price Work*

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

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

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

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

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

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

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

1. *Change Orders:*

- a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
- b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

- 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

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

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change

involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

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

11.04 *Change of Contract Price*

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



11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

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

#### 11.05 *Change of Contract Times*

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

#### 11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
  - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
  3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

#### 11.07 *Execution of Change Orders*

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

#### 11.08 *Notification to Surety*

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

## ARTICLE 12 – CLAIMS

### 12.01 *Claims*

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

the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

### 13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
  - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
  - g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded*: The term Cost of the Work shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

### 13.02 Allowances

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

- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

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

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
  - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  - 3. by manufacturers of equipment furnished under the Contract Documents;
  - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

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

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.



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

#### 14.04 *Acceptance of Defective Work*

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

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

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

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

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

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

### 15.01 *Progress Payments*

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

Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
    - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
    - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
  4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    - a. to supervise, direct, or control the Work, or
    - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
    - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
    - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
    - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
  5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
  6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
    - a. the Work is defective, requiring correction or replacement;
    - b. the Contract Price has been reduced by Change Orders;
    - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
    - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
    - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

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

E. *Reductions in Payment by Owner:*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
  - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. the Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. the Contract Price has been reduced by Change Orders;
  - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
  - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
  - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction

imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

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

#### 15.03 *Substantial Completion*

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

may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
  - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
  - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
  - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

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

#### 15.06 *Final Payment*

- A. *Application for Payment:*
  - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
    - a. all documentation called for in the Contract Documents;
    - b. consent of the surety, if any, to final payment;
    - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
    - d. a list of all disputes that Contractor believes are unsettled; and
    - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
  3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Application and Acceptance:*
1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer



(less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

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

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such other adjacent areas;
  - 2. correct such defective Work;
  - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with

respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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

## **ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

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

### **16.02 *Owner May Terminate for Cause***

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

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

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

#### 16.03 *Owner May Terminate For Convenience*

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

#### 16.04 *Contractor May Stop Work or Terminate*

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

Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## **ARTICLE 17 – FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

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

## **ARTICLE 18 – MISCELLANEOUS**

### **18.01 *Giving Notice***

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

### **18.02 *Computation of Times***

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

### **18.03 *Cumulative Remedies***

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of

them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

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

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# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

## Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect. Additional amendments or supplements to the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition) or these Supplementary Conditions may be made in subsequent Engineer's Supplementary Conditions.

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

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

## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### SC-1.01 Definitions and Terminology

SC-1.01.A Add the following sentence to the end of Paragraph 1.01.A.48:

A work change directive cannot be carried without an Owner authorized change order. There can be no change in Contact Time or Contract Price without an Owner authorized change order.

SC-1.01.A Add the following new paragraph immediately following Paragraph 1.01.A.48

49. Liquidated Damages: An amount agreed to by the parties as an estimate of Owner's actual damages

## ARTICLE 2– PRELIMINARY MATTERS

### SC-2.02 Copies of Documents

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor three printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF).

## ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### SC-3.05 Reuse of Documents

SC-3.05.A Add the following subparagraph immediately following Paragraph 3.05.A.2:

3. The Contractor agrees not to use the existence of this Contract or the name of the Owner as part of any commercial advertising.

## ARTICLE 4– COMMENCEMENT AND PROGRESS OF THE WORK

### SC-4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A Amend Paragraph 4.01.A to read the following:

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

### SC-4.05 *Delays in Contractor’s Progress*

SC-4.05.C Add the following subparagraphs immediately following paragraph 4.05.C.2:

- a. Abnormal weather conditions for precipitation shall be determined on a monthly basis by taking the 20-year average where daily precipitation exceeded 0.1 inches from the NOAA weather reporting station nearest the project. The Contractor shall take into consideration these monthly anticipated abnormal weather days when submitting the Bid, and therefore these calendar days are included in the Contract Time.
- b. When actual number of abnormal weather days the Contractor could not work due to abnormal weather conditions exceeds the monthly average as determined above, the Contract shall be extended the number of days in excess of the monthly average for each month during the Contract Time. A working day is when the Contractor or their subcontractors could work for more than four (4) hours. If the actual number days the contractor could not work is due to abnormal weather conditions is less than the monthly average, then the number of days the Contract was extended shall be reduced for the Contract period. At the end of the Contract period the total Contract Time will be total adjusted. Should the total days the Contractor cannot work due to abnormal weather conditions be less than the mean for the Contract period, no time will be deducted from the Contract.
- c. Abnormal weather days shall be reported within 30 days of the final day of the month requested. Any abnormal weather days reported after this 30-day period will not be considered.
- d. The Contractor shall be responsible for documenting and demonstrating that all abnormal weather days, including but not limited to those cause by precipitation, caused delays specific to the planned work activities or that such activities thus delayed were on the Contractor’s then-current Project’s critical path.
- e. The Contractor’s change request shall be for time only. No increase in the Contract Price will be considered.

## ARTICLE 6 – BONDS AND INSURANCE

### SC-6.02 *Insurance—General Provisions*



SC-6.02 Add the following language to the end of Paragraph 6.02.C:

Failure of the Contractor to provide timely evidence of insurance, or to place coverage with insurance companies acceptable to the Owner, shall be viewed as Contractor's delaying performance entitling the Owner to all appropriate remedies under the law including termination of the Contract.

SC-6.02 Add the following new paragraphs immediately following Paragraph 6.02.J:

- K. Any deductibles or self-insured retentions in the required insurance shall be subject to approval by the Owner.
- L. All insurance policies put forth to satisfy the above requirements shall require the insurer to provide a minimum of thirty (30) days' notice to the Owner of any material change in coverage, cancellation, or non-renewal

SC-6.03 *Contractor's Insurance*

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

- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
  - 1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u>N/A</u>
Bodily injury by disease, aggregate	\$ <u>N/A</u>
Employer's Liability:	
Bodily injury, each accident	\$ <u>150,000.00</u>
Bodily injury by disease, each employee	\$ <u>150,000.00</u>
Bodily injury/disease aggregate	\$ <u>150,000.00</u>
For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$ <u>N/A</u>
Foreign voluntary worker compensation	<u>N/A</u>

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

General Aggregate	\$ <u>1,000,000.00</u>
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Products - Completed Operations Aggregate	\$ <u>1,000,000.00</u>
Personal and Advertising Injury	\$ <u>1,000,000.00</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000.00</u>

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

Bodily Injury:

Each person	\$ <u>1,000,000.00</u>
Each accident	\$ <u>1,000,000.00</u>

Property Damage:

Each accident	\$ <u>1,000,000.00</u>
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[or]

Combined Single Limit of	\$ <u>2,000,000.00</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>2,000,000.00</u>
General Aggregate	\$ <u>2,000,000.00</u>

5. Contractor's Pollution Liability:

Each Occurrence	\$ <u>N/A</u>
General Aggregate	\$ <u>N/A</u>

If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

*SC-6.05 Property Insurance*

SC-6.05 Amend Paragraph 6.05.B to read the following:

- B. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to the purchasing policy holder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.

## ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

### SC-7.03 Services, Materials, and Equipment

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

- D. All manufactured items and/or fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving a connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate inspector which customarily requires the label or re-examination listing or identification marking of the appropriate safety standard organization, such as the American Society of Mechanical Engineers for pressure vessels; the Underwriters Laboratories and /or National Electrical Manufacturers’ Association for electrically operated assemblies; or the American Gas Association for gas operated assemblies, where such approvals of listings have been established for the type of device offered and furnished. Further, all items furnished shall meet all requirements of the Occupational Safety and Health Act (OSHA), and state and federal requirements relating to clean air and water pollution.

### SC-7.06 Concerning Subcontractors, Suppliers, and Others

SC-7.06 Add the following new paragraph immediately after Paragraph 7.06.O

- P. The Contractor shall not subcontract more than 50% of the Contract price without prior written approval of the Owner.

### SC-7.09 Taxes

SC-7.09 Add the following new paragraph immediately after Paragraph 7.09.A:

- B. The following procedure in handling the North Carolina Sales Tax is applicable to this project. Contractors shall comply fully with the requirements outlined hereinafter, in order that the Owner may recover the amount of the tax permitted under law.
  - 1. It shall be the Contractor’s responsibility to furnish the Owner documentary evidence showing the materials used and sales tax paid by the Contractor and each of his subcontractors.
  - 2. The documentary evidence shall consist of a notarized certified statement, by the Contractor and each of his subcontractors individually, showing the total purchases of materials from each separate vendor and totals sales taxes paid each vendor. Certified statement must show the invoice number, or numbers, covered and inclusive dates of such invoices. Copies of the listed invoices shall accompany the Sales Tax Report and shall be submitted with each Application for Payment.
  - 3. Materials used from Contractor’s or subcontractor’s warehouse stock shall be shown in a notarized certified statement at warehouse stock prices.
  - 4. The Contractor shall not be required to certify the subcontractor’s statements.

### SC-7.10 Laws and Regulations

SC-7.10 Add the following new paragraph immediately following Paragraph 7.10.C:

- C. In the event any changes in Laws and Regulations require alteration of the material, quality, workmanship or performance of the items offered prior to

their delivery, it shall be the responsibility of the Contractor to notify, in writing, the Owner at once, indicating the specific regulation which required such alterations. The Owner reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the contract.

*SC-7.18 Indemnification*

SC-7.18 Add the following language to the end of Paragraph 7.18.A

Additionally the above provisions applies to any claims that can be attributed to an intentionally tortuous act of the Contractor.

**ARTICLE 13 – COST OF WORK; ALLOWANCES, UNIT PRICE WORK**

*SC-13.01 Cost of the Work*

SC-13.01.B.5 Delete Paragraph 13.01.B.5.c in its entirety and insert the following in its place:

- c. Construction Equipment and Machinery:
  - i. Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - ii. Costs for equipment and machinery owned by Contractor will be paid at the prorated monthly rental rate shown for such equipment in the “Compilation of Rental Rates for Construction Equipment” as published by the Associated Equipment Distributors. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include 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, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

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

*SC-14.02 Test, Inspections, and Approvals*

SC-14.02 Delete Paragraph 14.02.B in its entirety and insert the following in its place:

- B. Contractor shall retain and pay for the services which require an independent inspector or qualified individual or entity to perform all inspections and test expressly required by the Contract Documents. The names and qualifications of the individual or entity shall be submitted to the Engineer for review and approval within 10 days of the Notice to Proceed. The Contractor shall provide 48 hours’ notice to the Engineer prior to conducting the required test(s) so either the Engineer or Resident Project

Representative may bear witness to said test(s). The written results of the testing shall be forwarded to the Engineer within 24 hours of receipt.

## **ARTICLE 15 - PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**

### *SC-15.01 Progress Payments*

SC-15.01.D Delete Paragraph 15.01.D.1 and replace it with the following:

1. Payment terms are Net 30 after receipt of correct, Engineer and Owner approved payment applications or acceptance of goods, whichever is later. The Owner is responsible for all payments to the Contractor under this agreement.

SC-15.01.D Add the following new paragraph immediately after Paragraph 15.01.D.1

2. Any and all payments to the Contractor are dependent upon and subject to the availability of funds to the Owner for the purpose set forth in this Contract.

SC-15.01 Add the following new paragraph immediately following Paragraph 15.01.E:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

## **ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION**

### *SC-16.02 Owner May Terminate for Cause*

SC-16.02.A Add the following new paragraph immediately after Paragraph 16.02.A.4:

5. Upon the Contractor filing a petition for bankruptcy or the entering of a judgment of bankruptcy by or against the Contractor. In this case, the Owner also reserves the right to debar the Contractor from doing future business with the Owner.

## **ARTICLE 17 – FINAL RESOLUTIONS OF DISPUTES**

### *SC-17.01 Arbitration*

SC-17.01 Add the following new paragraphs immediately after Paragraph 17.01.B:

SC-17.01.C *Dispute Resolution Process*

1. Purpose

- a. These Rules are promulgated to implement a system of settlement events, which are designated to focus the parties' attention on settlement rather than on claim preparation and to provide a structured opportunity for settlement negotiations to take place. Nothing herein is intended to limit or prevent the parties from engaging in settlement procedures voluntarily at any time prior to or during commencement of the dispute resolution process.
2. Initiating Mediated Settlement Conferences
- a. Initiating the Dispute Resolution Process
    - i. Any party to a The Owner contract and who is a party to a dispute arising out of the construction process in which the amount in controversy is at least \$15,000 may submit a written request to the Owner for mediation of the dispute.
    - ii. Prior to submission of a written request for mediation to the Owner, the parties requesting mediation,
      - a. If a prime contractor, must have first submitted its claim to the Project Designer for review. If the dispute is not resolved through the Project Designer's instructions, then the dispute becomes ripe for mediation in the Formal Dispute Resolution Process, and the party may submit their written request for mediation to the Owner.
      - b. If the party requesting mediation is a subcontractor, it must first have submitted its claim for mediation to the prime contractor with whom it has a contract. If the dispute is not resolved through the Prime Contractor's involvement, then the dispute becomes ripe for mediation in the Formal Dispute Resolution Process, and the party may submit its written request for mediation to the Owner.
      - c. If the party requesting mediation is the Project Designer, then it must first submit its claim to the Owner to resolve. If the dispute is not resolved with The Owner's involvement, then the Project Designers' dispute is ripe for mediation in the Formal Dispute Resolution Process, and the Project Designer may submit its written request to the Owner for mediation.
2. Selection of Mediator
- a. Selection of Certified Mediator by Agreement of the Parties
    - i. The parties may select a certified mediator pursuant to the Rules by agreement within 21 days of requesting mediation. The requesting party shall file with the Owner a Notice of Selection of Mediator by Agreement within 10 days of the request; however, any party may file the notice. Such notice shall state the name, address and telephone number of the mediator selected; state the rate of compensation of the mediator; state that the mediator and opposing counsel have agreed upon the selection and rate of compensation; and state that the mediator is certified pursuant to these Rules.
  - b. Nomination and the Owner Approval of a Non-Certified Mediator

- i. The parties may select a mediator who does not meet the certification requirements of these Effective: 1 July 2014 20 Rules but who, in the opinion of the parties and the Owner is otherwise qualified by training or experience to mediate the action. If the parties select a non-certified mediator, the requesting party shall file with the Owner a Nomination of Non-Certified Mediator within 10 days of the request. Such nomination shall state the name, address and telephone number of the mediator; state the training, experience or other qualifications of the mediator; state the rate of compensation of the mediator; and state that the mediator and opposing counsel have agreed upon the selection and rate of compensation. The Owner shall rule on said nomination, shall approve or disapprove of the parties' nomination and shall notify the parties of its decision.
  - b. Appointment of Mediator by the Owner
    - i. If the parties cannot agree upon the selection of a mediator, the party or party's attorney shall notify the Owner and request, on behalf of the parties, that the Owner appoint a mediator. The request for appointment must be filed within 10 days after request to mediate and shall state that the parties have had a full and frank discussion concerning the selection of a mediator and have been unable to agree. The request shall state whether any party prefers a certified attorney mediator, and if so, the Owner shall appoint a certified attorney mediator. If no preference is expressed, the Owner may appoint a certified attorney mediator or a certified non-attorney mediator.
  - c. Mediator Information Directory
    - i. To assist the parties in the selection of a mediator by agreement, the parties are free to utilize the list of certified mediators maintained in any county participating in the Superior Court Mediation Settlement Conference Program. The Owner participates in this program.
  - d. Disqualification of Mediator
    - i. Any party may request replacement of the mediator by the Owner for good cause. Nothing in this provision shall preclude mediators from disqualifying themselves.
- 3. The Mediated Settlement Conference
  - a. Unless all parties and the mediator otherwise agree, the mediated settlement conference shall be held in the Owner. The mediator shall be responsible for reserving a place and making arrangements for the conference and for giving timely notice of the time and location of the conference to all attorneys, unrepresented parties and other persons and entities required to attend.
  - b. The deadline for completion of the mediation shall be not less than 30 days or more than 60 days after the naming of the mediator.
  - c. A party, or the mediator, may request that the Owner extend the deadline for completion of the conference. Such request shall state the reasons the extension is sought and shall be served by the moving party upon the other parties and the mediator. If any party does not consent to the request, said party shall promptly communicate its objection to the County. The Owner may grant the request by setting a new deadline for completion of the conference.

- d. The mediator may recess the conference at any time and may set times for reconvening. If the time for reconvening is set before the conference is recessed, no further notification is required for persons present at the conference.
  - e. The mediated settlement conference shall not be cause for the delay of the construction project, which is the focus of the dispute.
4. Attendance
- a. All parties to the dispute originally presented to the Designer or Prime Contractor for initial resolution must attend the mediation. Failure of a party to a construction contract to attend the mediation will result in the Owner withholding of monthly payment to that party until such party attends the mediation.
  - b. Attendance shall constitute physical attendance, not by telephone or other electronic means. Any attendee on behalf of a party must have authority from that party to bind it to any agreement reached as a result of the mediation.
  - c. Attorneys on behalf of parties may attend the mediation but are not required to do so.
  - d. Sureties or insurance company representatives are not required to attend the mediation unless any monies paid or to be paid as a result of any agreement reached as a result of mediation require their presence or acquiescence. If such agreement or presence is required, then authorized representatives of the surety or insurance company must attend the mediation.
5. Agreement Finalization
- a. If an agreement is reached in the conference, parties to the agreement shall reduce the terms to writing and sign it along with their counsel.
6. Mediation Fees
- a. The mediation fee shall be paid in accordance with N.C.G.S. §143- 128(g).
  - b. Any party's failure to compensate the mediators in accordance with N.C.G.S. §143-128(g) shall subject that party to a withholding of said amount of money from the party's monthly payment by the Owner.
7. Responsibilities of the Mediator(s)
- i. The mediator shall at all times be in control of the conference and the procedures to be followed.
  - ii. The mediator may communicate privately with any participant or counsel prior to and during the conference. The fact that private communications have occurred with a participant shall be disclosed to all other participants at the beginning of the conference.
  - iii. The mediator shall make a good faith effort to schedule the conference at a time that is convenient with the participants, attorneys and mediator. In the absence of agreement, the mediator shall select the date for the conference.
  - iv. The mediator shall define and describe the following at the beginning of the conference:
    - a. The process of mediation;



- b. The difference between mediation and other forms of conflict resolution;
  - c. The costs of the mediated settlement conference;
  - d. That the mediated settlement conference is not a trial, the mediator is not a judge, and the parties retain their legal rights if they do not reach settlement;
  - e. The circumstances under which the mediator may meet and communicate privately with any of the parties or with any other person;
  - f. Whether and under what conditions communications with the mediator will be held in confidence during the conference;
  - g. The inadmissibility of conduct and statements as provided by N.C.G.S. §7A38.1(1);
  - h. The duties and responsibilities of the mediator and the participants; and
  - i. That any agreement reached will be reached by mutual consent.
- v. The mediator has a duty to be impartial and to advise all participants of any circumstance bearing on possible bias, prejudice or partiality.
  - vi. It is the duty of the mediator to timely determine that an impasse exists and that the conference should end.
  - vii. The mediator shall report to the Owner within 10 days of the conference whether or not the parties reached an agreement. If an agreement was reached, the report shall state the nature of said agreement. The mediator's report shall inform the Owner of the absence of any party known to the mediator to have been absent from the mediated settlement conference without permission. The Owner may require the mediator to provide statistical data for evaluation of the mediated settlement conference program.
  - vii. It is the duty of the mediator to schedule the conference and conduct it prior to the deadline of completion set by the Rules. The mediator shall strictly observe deadlines for completion of the conference unless said time limit is changed by a written order from the Owner.
8. Compensation of Mediator
- i. When the mediator is stipulated by the parties, compensation shall be as agreed upon between the parties and the mediator provided that the provision of N.C.G.S. §143-128(g) are observed.
  - ii. When the mediator is appointed by the Owner, the parties shall compensate the mediator for mediation services at the rate in accordance with the rate charged for Superior Court mediation. The parties shall also pay to the mediator a one-time per case administrative rate in accordance with the rate charged for Superior Court mediation, which is due upon appointment.
9. Mediator Certification
- i. All mediators certified in the Formal Dispute Resolution Program shall be properly certified in accordance with the rules certifying mediators in Superior Court in North Carolina. (Except when otherwise allowed by the Owner upon the request of the parties to the mediation.) When selecting mediators, the parties may designate a preference for mediators with a background in construction law or

public construction contracting. Such requirements, while preferred, are not mandatory under these Rules.

- ii. All mediators chosen must either demonstrate they are certified in accordance with the Rules Implementing Scheduled Mediated Settlement Conference in Superior Court or must gain the consent of the Owner to mediate any dispute in accordance with these Rules.
10. These Rules are subject to amendment by the Owner at any time the County deems it appropriate.
11. Any time limit provided for by these Rules may be waived or extended by the mediator it appoints for good cause shown. If the mediator has not yet been appointed, the Designer of Record shall decide all waivers or extensions of time for good cause shown.

## **ARTICLE 18 – MISCELLANEOUS**

### *SC-18.07 Controlling Law*

SC-18.07 Delete paragraph 18.07.A in its entirety and insert the following in its place:

- A. This Contract is made under and shall be governed and constructed in accordance with the laws of the State of North Carolina

SC-18.07 Add the following new paragraph immediately before Paragraph 18.07.A:

- A. The Place of this Contract, its situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to its validity, construction, interpretation, and enforcement shall be determined.

SC-18.08 Add the following new paragraphs immediately following Paragraph 18.08:

### SC-18.09 Assignment

- A. No assignment of the Contractor's obligations nor the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority and solely as a convenience to the Contractor, the Owner may:
  - 1. Forward the Contractor's payment check directly to any person or entity designated by the Contractor.
  - 2. Include any person or entity designated by the Contractor as a joint payee on the Contractor's payment check.
- B. Under no circumstance shall such approval and action obligate the Owner to anyone other than the Contractor. The Contractor shall remain responsible for fulfillment of all Contract obligations.

### SC-18.10 Criminal Convictions Checks

- A. The Owner is committed to providing a crime free environment for its staff and citizens. If the contractual requirements requires your personnel will have access to various areas of Owner owned facilities. The Owner reserves the right to require a criminal convictions check on owners, officers, employees and any other workers of the Contractor and their subcontractors at any time upon written

request. The Contractor or the Contractor's direct representative shall accompany all new employees to the jobsite and present them to the Owner. At that time, if a criminal convictions check has been requested the Contractor shall provide a criminal history (not a letter) including traffic records, by presenting a document from a reputable company providing statewide searches covering a minimum of the last seven (7) years to the Owner. The criminal history shall match the name on state issued picture identification card. Out of state searches shall be required for persons living in the state of North Carolina for less than seven (7) years. The names, addresses and birth dates of each person that enters County property (including the owners and subcontracts) in the performance of this Contract shall be supplied with the criminal history on company letterhead signed by a representative duly authorized to sign on behalf of the company. This history shall be provided to the Owner at least twenty-four (24) hours prior to any person performing work under this Contract. Persons without this criminal history may be turned away and not allowed to work on any property owned or utilized by the County until proper documentation is submitted and approved by the Owner.

- B. The Owner reserves the right to keep any person from being assigned to work on its property if that person (1) has been convicted of a criminal offense since the age of eighteen (18), or (2) been found at any time to have an outstanding warrant or a pending court case, or, (3) if related to his/her work, has current habitual problems with traffic related issues such as no driver's license, no vehicle tags, and/or no insurance. The Contractor must disclose the criminal convictions records of all persons proposed to work on property with the designated county official.
- C. During the term of this Contract, the Contractor shall comply with these procedures for any new owner, officer, employee and any other worker of the Contractor and their subcontractors upon proper written notification by the Owner.
- D. The Owner shall maintain all criminal convictions checks in a secure locked container for the term of the Contract. At the end of the Contract period the Owner shall ensure that the files have been returned to Contractor or destroyed in such a manner as to prevent disclosure of any kind.

#### SC-18.11 Employee Verification

- A. Contractor shall verify and provide photo identification of each of its employees, and require the same of any subcontractors hired by Contractor. Contractor shall further utilize employees or subcontractors that speak fluent English such that they can understand any directions of the Contractor or the Owner, and be understood in their responses thereto.

#### SC-18.12 Inspection at Contractor's Site

- A. The Owner reserves the right to inspect, at a reasonable time, the equipment/item, plant or other facilities of a prospective contractor prior to Contract award, and during the Contract term as necessary for the Owner's determination that such equipment/item, plant or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Contract.

SC-18.13 Iran Divestment Act

- A. For new procurements and new, renewed, or assigned contracts with the Owner on or after February 26, 2016, each bidder or vendor must affirm that it is not listed on the State Treasurer's Final Divestment List found at [www.nctreasurer.com/Iran](http://www.nctreasurer.com/Iran) as of the date of signature. The certification shall be due at the time a bid is submitted or the time a contract is entered into, renewed, or assigned. (G.S. 147-86.55-69)
- B. Individuals or companies on the Final Divestment List are ineligible to contract or subcontract with the Owner. (G.S. 147-86.55-69.) Any existing contracts with these Iran-linked persons will be allowed to expire in accordance with the contract's terms. (G.S. 147-86.55-69.) Contracts valued at less than \$1,000.00 are exempt from this restriction. (G.S. 147-86.55-69.) In addition, the Owner may contract with, but is not required to, a listed individual or company if it makes a good-faith determination that (1) the commodities or services are necessary to perform its functions and (2) that, absent such an exemption, it would be unable to obtain those commodities or services. (G.S. 147-86.55-69.) Any such exemption shall be entered by the Owner into the procurement record. The Act provides that vendors to Local Government Units may not utilize any subcontractor found on the State Treasurer's Final Divestment List. (G.S. 147- 16 86.55-69.) It shall be each vendor's responsibility to monitor its compliance with this restriction.

SC-18.14 Affirmative Action

- A. The Contractor will take affirmative action in complying with all federal and state requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin or disability. Title VI is part of the Civil Rights Act of 1964, as amended, and its implementing regulations provide that no person shall be subject to discrimination on the basis of race, color or national origin under any program or activity that receives federal financial assistance. For our purposes, "national origin" equates to individuals who have a limited proficiency with the English language and their primary language is not English, hence, the term "limited English proficiency" or LEP.

ENGINEER’S SUPPLEMENTARY CONDITIONS

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## Engineer's Supplementary Conditions

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

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

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

### ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

#### SC-1.01 *Defined Terms*

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

Geotechnical Baseline Report (GBR) — The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR is a Contract Document.

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.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.06 *Electronic Transmittals*

SC-2.02.D. Add the following to paragraph 2.06:

D. Engineer will be utilizing an internet/web site based Electronic Project Management System (EPMS) for the project. Contractor will be responsible to interface with EPMS and provide information via EPMS. A high-speed connection is required as well as the ability to create/markup documents using Adobe Acrobat (pdf) and to scan documents.

ARTICLE 4 - CONTRACT TIMES

SC- 4.05 *Delays in Contractor’s Progress*

SC-4.05.C.2 Add the following language at the end of paragraph 4.05.C.2:

Work shall not be performed when weather creates work site conditions that are unsafe for workmen or for the general public, or prevent performance of contract provisions. The nearest NOAA weather reporting station is located in Mount Holly, NC having mean inclement weather days indicated in the chart below:

RECORD OF MONTHLY AVERAGE PRECIPITATION DAYS > = 0.1 INCH											
YEAR 1892 TO YEAR 2012											
MT HOLLY 4 NE, NORTH CAROLINA											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
7	7	7	6	6	7	7	7	5	5	5	6

Partial months at the beginning and ending of the contract period will be prorated proportionally. Inclement weather occurring on holidays, Saturdays, or Sundays are included in the Chart above. The Contractor shall take into consideration these monthly anticipated inclement weather days when submitting his Bid, and therefore these calendar days are included in the contract time.



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

SC-5.03 *Subsurface and Physical Conditions*

SC/GBR-5.03 and 5.04. Delete Paragraphs 5.03 and 5.04 of the General Conditions in their entireties and replace with the following provisions:

SC/GBR-5.03 Subsurface and Physical Conditions

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

1. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), and Technical Data contained in such drawings. Such drawings are as follows:

- a. Not Applicable

B. Reliance by Contractor on Technical Data Authorized:

Contractor may rely upon the accuracy of the Technical Data contained in such reports and drawings, but such reports and drawings are not Contract Documents. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

C. Geotechnical Baseline Report:

1. This Contract contains a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR), identified as follows:
  - a. Report of Subsurface Explorations and Geotechnical Engineering Evaluation for [Insert Option Here] dated [Insert Option Here]. The

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EJCDC® C-800 (Rev. 1), Engineer's Supplementary Conditions.

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Subsurface Explorations portion is considered the GDR and the Geotechnical Engineering Evaluation is considered the GBR.

2. The GBR and GDR are incorporated as Contract Documents. The GBR and BDR are to be used in conjunction with other Contract Documents, including the Drawings and Specifications. If there is a conflict between the terms of the GBR and the GDR, the GBR's terms shall prevail.
3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.
4. The Baseline Conditions shall be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions shall be used to determine whether there is a differing site condition; and no other indication of that condition in the Contract Documents or Technical Data, or of a condition that describes, quantifies, or measures a similar characteristic of the subsurface, shall be used for the differing site condition determination.
5. The Baseline Conditions shall not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions shall be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR shall be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.
6. The descriptions of subsurface conditions provided in the GBR 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 GBR, nor is the GBR 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. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.
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/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 GBR; or
  2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or
  3. differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or
  4. to the extent the GBR and 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
  5. to the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or
  6. to the extent the GBR and GDR are 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 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*

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 10 – ENGINEER’S STATUS DURING CONSTRUCTION

### SC-10.03 *Project Representative*

SC-10.03.A. Replace paragraph 10.03.A to as follows:

A. The Owner has retained the services of the Engineer to furnish a Resident Project Representative as the Site to assist the Owner in observing the progress and quality of the Work. The authority and responsibilities of the Resident Project Representative will be as provided in Paragraph 10.08.

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

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
  2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
  3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
  4. Liaison:
    - a. Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
    - b. Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.
    - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
  - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
  - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
  - a. Conduct on-site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:
  - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

- b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items



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

14. Completion:

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

C. The RPR shall not:

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

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

SC-14.02 *Tests, Inspections, and Approvals*

SC-14.02.B Delete Paragraph 14.02.B in its entirety and insert the following in its place:

- 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 Statement of Special Inspections provided in the Contract Documents to be furnished and paid for by the Owner, except that the costs incurred in connection with retests or reinspection as a result of defective work. Contractor shall retain and pay for the services which require an independent inspector or qualified individual or entity to perform all other inspections and test expressly required by the Contract Documents. The names and qualifications of the individual or entity shall be submitted to the Engineer for review and approval within 10 days of the Notice to Proceed. The Contractor shall provide 48 hours' notice to the Engineer prior to conducting the required test(s) so wither the Engineer or Resident Project Representative may bear witness to said test(s). The written results of the testing shall be forwarded to the Engineer within 24 hours of receipt.

## **SRF SPECIAL CONDITIONS**

The attached instructions and regulations as listed below shall be incorporated into the Specifications and comprise the SRF Special Conditions:

1. Davis-Bacon Requirements – (Attachment No. 1).
2. Davis-Bacon Wage Determination – (Attachment No. 2).
3. Contractor Table – (Attachment No. 3)

**These Special Conditions shall supersede any conflicting provisions of this contract.**

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## **Davis-Bacon and Related Acts Provisions and Procedures:** **CFR Title 29 Part 5**

Revised on: 1/18/2009

**Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also Labor Standards Provisions Applicable to Non construction Contracts Subject to the Contract Work Hours and Safety Standards Act.**

### **29 CFR 5.5 - Contract provisions and related matters**

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in Sec. 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, Provided, That such modifications are first approved by the Department of Labor):

(1) Minimum wages. (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each

classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in

providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records. (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the

case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at [://www.dol.gov/whd/forms/wh347instr.htm](http://www.dol.gov/whd/forms/wh347instr.htm) or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under Sec. 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under Sec. 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours



on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and

Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility. (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Sec. 5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

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

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

contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b) (1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in Sec. 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(The information collection, recordkeeping, and reporting requirements contained in the following paragraphs of this section were approved by the Office of Management and Budget:

Paragraph	OMB Control Number
(a) (1) (ii) (B).....	1215-0140
(a) (1) (ii) (C).....	1215-0140
(a) (1) (iv).....	1215-0140
(a) (3) (i).....	1215-0140, 1215-0017
(a) (3) (ii) (A).....	1215-0149
(c).....	1215-0140, 1215-0017

[48 FR 19540, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 55 FR 50150, Dec. 4, 1990; 57 FR 28776, June 26, 1992; 58 FR 58955, Nov. 5, 1993; 61 FR 40716, Aug. 5, 1996; 65 FR 69674, Nov. 20, 2000; 73 FR 77511-77512, Dec. 19, 2008]

**PAYROLL**

(For Contractor's Optional Use; See Instructions at [www.dol.gov/whd/forms/wh347Instr.htm](http://www.dol.gov/whd/forms/wh347Instr.htm))



Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

NAME OF CONTRACTOR <input type="checkbox"/> OR SUBCONTRACTOR <input type="checkbox"/>	ADDRESS	OMB No.: 1215-0149 Expires: 12/31/2011
---	---------	---

PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
-------------	-----------------	----------------------	-------------------------

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT. OR ST.	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK	
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS			
				MON	TUE	WED	THU	FRI	SAT	SUN										
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(i) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

**Public Burden Statement**

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

Date \_\_\_\_\_

I, \_\_\_\_\_ (Name of Signatory Party) \_\_\_\_\_ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the  
 \_\_\_\_\_ (Contractor or Subcontractor)  
 \_\_\_\_\_; that during the payroll period commencing on the  
 \_\_\_\_\_ (Building or Work)  
 \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_,  
 all persons employed on said project have been paid the full weekly wages earned, that no rebates have  
 been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ from the full  
 \_\_\_\_\_ (Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly  
 from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part  
 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,  
 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(2) That any payrolls otherwise under this contract required to be submitted for the above period are  
 correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the  
 applicable wage rates contained in any wage determination incorporated into the contract; that the  
 classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide  
 apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of  
 Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a  
 State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in  
 the above referenced payroll, payments of fringe benefits as listed in the contract  
 have been or will be made to appropriate programs for the benefit of such  
 employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid,  
 as indicated on the payroll, an amount not less than the sum of the applicable  
 basic hourly wage rate plus the amount of the required fringe benefits as listed  
 in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR  
 SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE  
 31 OF THE UNITED STATES CODE.

## LABOR STANDARDS INTERVIEW

CONTRACT NUMBER AND LOCATION			EMPLOYEE INFORMATION		
			LAST NAME	FIRST NAME	MI
NAME OF PRIME CONTRACTOR			STREET ADDRESS		
NAME OF EMPLOYER			CITY	STATE	ZIP CODE
SUPERVISOR'S NAME			WORK CLASSIFICATION		WAGE RATE
LAST NAME	FIRST NAME	MI			

ACTION	CHECK BELOW	
	YES	NO
Do you work over 8 hours per day?		
Do you work over 40 hours per week?		
Are you paid at least time and a half for overtime hours?		
Are you paid for all hours worked?		
Do you receive a 30-minute break for every 6 hours worked?		
Have you ever been threatened or coerced into giving up any part of your pay?		
Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?		

Examples of "bona fide" fringe benefits include (but are not limited to) life insurance, health insurance, pension, vacation, holidays, and sick leave

WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?

HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?	DUTIES PERFORMED	TOOLS USED
DATE OF LAST WORK DAY BEFORE INTERVIEW (YYMMDD)		
WHEN DID YOU BEGIN WORK ON THIS PROJECT? (YYMMDD)		

I HAVE READ THE ABOVE AND CERTIFY IT TO BE CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE <b>X</b>	DATE (YYMMDD)
INTERVIEWER'S SIGNATURE	DATE (YYMMDD)

### INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED	ACTION <i>(if explanation is needed, use comments section)</i>	YES	NO
	IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?		
	ARE WAGE RATES AND POSTERS DISPLAYED?		

### FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROL DATA?  YES  NO

COMMENTS

CHECKER			
LAST NAME	FIRST NAME	MI	JOB TITLE
SIGNATURE			DATE (YYMMDD)

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# EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

## FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

### PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

### OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

### ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

### APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

### PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:

**1-866-4-USWAGE**  
(1-866-487-9243) TTY: 1-877-889-5627



**WWW.WAGEHOUR.DOL.GOV**

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# NC Division of Water Infrastructure MBE/WBE (DBE) Compliance Supplement Instructions

*(This package combines the various aspects of State of NC HUB program requirements and Federal DBE requirements into a single compliance supplement in order to eliminate redundancy and ambiguity)*

Item	What to do with it
Good Faith Efforts Form	Provided by all bidders to be responsive Only low bidder's form is submitted to the State
Table A (Summary of firms on job)	Provided by all bidders to be responsive Only low bidder's form is submitted to the State
Table B (per item being subbed)	Provided by low bidder if SRF project or SRP/SEL* that obtains less than 10% M/WBE utilization (see page 2)
Provide documentation of anything you did that is mentioned later in this supplement	- Proof of trade paper advertisement - Printouts of DBE sources used - Solicitation emails and/or letters
<b>Additional Forms for SRF Projects (these forms are currently not applicable)</b>	
<del>6100-3 (per M/WBE firm)</del>	<del>Provided by low bidder if SRF project</del>
<del>6100-2</del>	<del>Distributed to M/WBE firms if SRF project</del>
<del>Subs submit concerns on 6100-2 forms to:</del>	<del><b>Michael Pigram</b> <b>Region 4, Atlanta Federal Center</b> <b>61 Forsyth Street</b> <b>Atlanta, GA 30303-8960</b></del>

## NOTES on this Compliance Supplement

### Verifiable Goals

- |   |           |
|---|-----------|
| <b>EPA MBE/WBE participation goals:</b> | MBE 10.9% |
|   | WBE 10.4% |

These are goals that the State reports against and are not quotas. *The good faith efforts must be adhered to and all forms provided regardless of what percentage utilization is achieved.*

- |  |                |
|--|----------------|
| <b>State of NC MBE/WBE participation goal:</b> | 10% (combined) |
|--|----------------|

Table B is not required for SRP and SEL projects if you achieve 10% utilization.

### DBE (MBE or WBE) Certification

In order for a firm to count towards the goals, a firm must be properly certified. Table A and Table B both provide spaces to note who certified the firm. The North Carolina Department of Administration and North Carolina Department of Transportation are the most common certifications we see listed. Division of Water Infrastructure staff verify all certifications listed.

**For SRF projects, please note the EPA’s six Good Faith Efforts found in 40 CFR 33**

Filling out the Good Faith Efforts Form and providing Table B (if subcontracting is achieved) constitutes compliance with EPA’s six good faith efforts.

- (1) Ensure MBE/WBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and local Government recipients, this will include placing MBE/WBEs on solicitation lists and soliciting them whenever they are potential sources.
- (2) Make information of forthcoming opportunities available to MBE/WBEs and arrange time for contracts and establish delivery schedules, where requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (3) Consider in the contracting process whether firms competing for large contracts could subcontract with MBE/WBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities in order to increase opportunities for participation by MBE/WBEs in the competitive process.
- (4) Encourage contracting with a consortium of MBE/WBEs when a contract is too large for one of these firms to handle individually.
- (5) Use the services and assistance of the SBA and the MBDA.
- (6) If the prime contractor awards subcontracts, require the prime contractor to take the steps in subparagraphs (1)-(5) of this section.

**Pertinent State of North Carolina Administrative Code Regarding M/WBE Compliance. The provisions in this Compliance Supplement constitute compliance with the Rules below.**

Owner Requirements	01 NCAC 30I .0306
Contractor Requirements	01 NCAC 30I .0308

**Resources**

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***Some sources for identifying MBE/WBE (DBE) firms***

- <https://www.ips.state.nc.us/vendor/SearchVendor.aspx> (NCDOA)
- <https://www.ebs.nc.gov/VendorDirectory/default.html> (NCDOT)
- [http://dsbs.sba.gov/dsbs/search/dsp\\_dsbs.cfm](http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm) (US SBA)

***Some sources for finding minority trade papers for potential solicitation advertisements and Federal advertising options***

- <http://web.sba.gov/subnet/> (US SBA Subnet advertising website)
- <https://www.mbd.gov/> (US Dept. of Commerce)
- <https://ncadmin.nc.gov/businesses/hub> (NC HUB Office)

## Good Faith Efforts Form

---

*Attempts to provide subcontracting opportunities for MBE/WBE firms.*

Per 01 NCAC 30I .0101, 50 points must be claimed below by the bidder.

*(This is identical to State of NC Affidavit A)*

- 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.

Results of Good Faith Efforts Undertaken (you must check one box below)

- No subcontractors are being used for this contracted work. Fill out Table A listing only the Prime Contractor. (This statement takes the place of State of NC Affidavit B)
- Subcontractors are being used. Fill out Table A and B for each trade. **Each Table B lists 3.**
- Subcontractors are being used. If any Table B has fewer than 3 solicitations you must also advertise in an M/WBE trade paper and indicate what source of M/WBE firms you used (*must list at least one*). Some possible papers and sources of M/WBE firms are listed in the Instructions of this Supplement.

Name of the Trade Paper: \_\_\_\_\_

Submit proof of advertisement with package

M/WBE Sources:      Source: \_\_\_\_\_      Source: \_\_\_\_\_

Submit printouts from M/WBE source(s)

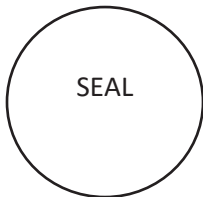
**Certification Statement and Affidavit of Contractor.**

The below affidavit constitutes compliance with 01NCAC 30I .0308(7)(a) and (b) and takes the place of State of North Carolina Affidavits C and D.

I have read the information in this compliance supplement and all information provided to the State in this package is accurate and true to the extent of my knowledge including the calculated percentages and the good faith efforts presented herein.

\_\_\_\_\_  
Prime Contractor Company Name (Print)

\_\_\_\_\_  
Prime Contractor Representative (Sign & Date)



State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public \_\_\_\_\_

My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Applicant Name (Print)

\_\_\_\_\_  
Applicant Authorized Representative (Sign & Date)

\_\_\_\_\_  
Division of Water Infrastructure Project Number



## Table A: Prime Contractor and list of selected subcontractors

List Prime and ALL of the selected subcontractors (both DBE's and non-DBE's) being used on the project. Each Trade listed on this sheet should have a completed Table B: Subcontract Solicitation List showing the DBE firms contacted and given opportunities to bid.

Company Name (list prime first then subs)	Company Address and Phone	Trade (Above) and Price (Below)	MBE or WBE and certifying agency <u>if applicable</u>	(State use only) Listed in EPLS as Debarred?
		\$		
		\$		
		\$		
		\$		

Calculate M/WBE utilization as a percent (00.00%) of the prime contract. Limited to 100% even if the Prime is a DBE.

<b>MBE and WBE subs total</b>	\$	_____ %
<b>Prime Contract Price</b>	\$	

Note: Table A substitutes for both the State of NC "Identification of Minority Participation" form and EPA Form 6100-4.

## Table B: Subcontract Solicitation List

Table B is required if:

- 1) Project is Federally funded (**SRF**) OR;
- 2) Project is a State Reserve Project or State Emergency Loan (**SRP or SEL**) and Utilization % on Table A is less than 10%
- 3)

**Trade: \_\_\_\_\_ (enter the trade being solicited, paving, hauling etc.)**

**List the firm being used on the project first. If three MBE or WBE firms are not listed, additional information must be provided showing advertisements and sources used to identify MBE/WBE subs.**

**Use as many of these sheets as are necessary to cover every trade being subbed out.**

Company Name	Company Address and Phone	MBE or WBE and certifying agency if applicable.	How was this firm contacted (email, letter, phone) and what was the result of the solicitation?*

\*Must submit copies of emails or letters. If phone calls were made this sheet can serve as documentation of calls.

## MBE/WBE (DBE) – Change or Add a Subcontractor Form

According to EPA guidance on 40 CFR 33.302

*If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the six good faith efforts described in §33.301 if soliciting a replacement subcontractor.*

Please provide the information below **if the subcontracted work in question was included in previously submitted good faith efforts documentation:**

Prime Contractor:

Subcontracted work:

Previous Subcontractor:

Reason this firm did not complete the work:

New subcontractor and DBE status:

MBE

WBE

N/A

If this is a new trade being subcontracted, or was not documented in the original Project Bid Information submittal to the State then good faith efforts to solicit a DBE firm must be documented. As the original DBE instructions indicate, please provide a Table B from those original instructions, showing all the DBE firms contacted to perform this work. If three (3) firms are not listed on Table B, then additionally you must submit proof of an advertisement in a minority trade paper and evidence that there were not three reasonably available firms in the work area. The EPA provides in 33.301(a) that good faith efforts are to be carried out "...to the fullest extent practicable...". If solicitations were not carried out due to being impracticable, please attach this explanation to this form.

**Please follow the steps below for new subcontracted work:**

Indicate the new trade being subcontracted:

Indicate the firm being used and DBE status:

MBE

WBE

N/A

Attach Table B

(For State Use) Is this sub debarred?

Yes

No

\_\_\_\_\_  
Project Owner/Applicant:

\_\_\_\_\_  
Project Number:

\_\_\_\_\_  
Signature of Prime Contractor's Representative

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# American Iron and Steel (AIS)

## Guidance for SRF Projects in North Carolina

This state guidance **summarizes** the requirements under Subsection 436 (a)(2) of the Consolidated Appropriations Act of 2014 that SRF recipients only use iron and steel products produced in the United States. The Environmental Protection Agency provides full guidance on the requirements at the following website:

[http://water.epa.gov/grants\\_funding/aisrequirement.cfm](http://water.epa.gov/grants_funding/aisrequirement.cfm).

Recipients of subject SRF awards must submit the executed **Certification for SRF Projects** and any waiver requests with their Bid Package. The recipient cannot receive a promissory note without these items.

Manufacturers can use the template “Compliance Certification” to document that materials are “produced in the United States.”

## Contents

1. Certification for SRF Projects
2. AIS Waiver Instructions
3. Materials covered by AIS
4. Template *Compliance Certification* for Materials Covered by AIS
5. Template *De Minimis* list

American Iron and Steel (AIS)

**Certification for SRF Projects**

Recipients of subject SRF awards must submit **this executed form and any waiver requests** with their Bid Information package to the State SRF program in order to receive funding.

The     (Applicant)   certifies that their contractors performing construction, alteration, maintenance and repair of the public treatment works under project number    will comply with subsection 436 (a)(2) of the Consolidated Appropriations Act of 2014 and only use iron and steel products produced in the United States.

<b>Contractor Representative</b>	<b>Project Applicant/Owner Representative</b>
(print)_____	(print)_____
(sign and date)_____	(sign and date)_____
<b>Company Name</b>	<b>Applicant/Owner Name and Project No.</b>
_____	_____

## AIS Waiver Instructions

Approved national waivers can be found at this website:

[http://water.epa.gov/grants\\_funding/aisrequirement.cfm](http://water.epa.gov/grants_funding/aisrequirement.cfm)

Please note that a national waiver for “*de minimis*” iron and steel components has been approved. A table is included in this document for use in documenting what items are to be considered as covered under this waiver. Note that no single *de minimis* item can be more than 1% of the total material cost of the project and the total of all *de minimis* items must not exceed 5% of the **total material cost of the project**.

Waiver Requests are provided for in subsection 436(b) of the Act. It states they will be granted if the Administrator of the EPA finds that:

- (1) Applying subsection (a) would be inconsistent with the public interest;
- (2) Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
- (3) Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

A checklist of items for a complete waiver application package can be found in the EPA guidance document for AIS found here:

[http://water.epa.gov/grants\\_funding/upload/AIS-final-guidance-3-20-14.pdf](http://water.epa.gov/grants_funding/upload/AIS-final-guidance-3-20-14.pdf)

- Submit DWSRF waiver requests to [vincent.tomaino@ncdenr.gov](mailto:vincent.tomaino@ncdenr.gov).
- Submit CWSRF waiver requests to [mark.hubbard@ncdenr.gov](mailto:mark.hubbard@ncdenr.gov).

The State will forward these to the EPA for a final determination.

**Materials Covered by AIS**

Lined and unlined pipes and fittings, manhole covers, municipal castings (detailed below), hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel (detailed below), reinforced precast concrete and construction materials (detailed below). Products must be composed of greater than 50% iron and steel measured by cost and permanently incorporated into the project to be subject to the provision.

<b><u>Municipal Castings</u></b>	<b><u>Structural Steel</u></b>	<b><u>Construction Material</u></b>
Access Hatches Ballast Screen Benches Bollards Cast Bases Cast Iron Hinged Hatches Cast Iron Riser Rings Catch Basin Inlet Cleanout/Monument Boxes Construction Covers and Frames Curb and Corner Guards Curb Openings Detectable Warning Plates Downspout Shoes Drainage Grates, Frames and Inlets Inlets Junction Boxes Lampposts Manhole Covers, Rings, Frames and Risers Meter Boxes Service Boxes Steel Hinged Hatches Steel Riser Rings Trash Receptacles Tree Grates Tree Guards Trench Grates Valve Boxes, Covers and Risers	Wide Flange shapes I-beams Channels Angles Tees Zees H-piles Sheet piling Tie Plates Cross Ties  (note: at least one dimension must be 3 inches or greater to be subject)	Wire Rod Bar Angles Concrete Reinforcing Bar Wire Wire Cloth Wire Rope and Cables Tubing Framing Joists Trusses Fasteners Welding Rods Decking Grating Railings Stairs Access Ramps Fire Escapes Ladders Wall Panels Dome Structures Roofing Ductwork Surface Drains Cable Hanging Systems Manhole Steps Fencing and Fence Tubing Guardrails Doors Stationary Screens

Mechanical and electrical components, equipment and systems are not subject to AIS. See the EPA guidance for details.



**Template Compliance Certification For Materials Covered by AIS**

Company Name:

Company Address:

SRF Project name and project number:

I \_\_\_\_\_, certify that the following products were produced at the following location or steps in the production of the listed products, occurred at the following location:

Location:

<u>Product</u>	<u>Step in production (Final production, melting, bending, etc.)</u>
----------------	--

- |    |  |
|----|--|
| 1) |  |
| 2) |  |
| 3) |  |

Therefore, these materials are “produced in the United States.”

\_\_\_\_\_  
(signature and title of company representative)

\_\_\_\_\_  
(date)

## De Minimis List

<u>Item</u>	<u>Cost</u>

**Total De Minimis Cost:** \$ \_\_\_\_\_

**Total Material Cost For Project:** \$ \_\_\_\_\_

**De Minimis Cost is** \_\_\_\_\_ **percent of total material costs.**

"General Decision Number: NC20200070 01/03/2020

Superseded General Decision Number: NC20190070

State: North Carolina

Construction Type: Heavy

Counties: Bladen, Cleveland, Columbus, Davidson, Duplin, Harnett, Iredell, Lee, Lenoir, Lincoln, Montgomery, Moore, Richmond, Robeson, Rowan, Sampson, Scotland, Stanly and Wilson Counties in North Carolina.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts,

including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number      Publication Date  
 0                              01/03/2020

SUNC2011-051 08/26/2011

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 15.47	1.50
CEMENT MASON/CONCRETE FINISHER...\$	13.10	1.32
LABORER: Common or General.....\$	9.52	0.00
LABORER: Pipelayer.....\$	12.13	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....\$	16.18	0.00
TRUCK DRIVER.....\$	12.02	0.00

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 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other

health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

"



**Work Change Directive No.**

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_  
 Owner: Lincoln County, North Carolina Owner's Contract No.: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
 Engineer: W.K. Dickson & Co., Inc. Engineer's Project No.: #20170294.00.CL  
 Project: Killian Creek WWTP Upgrade Phase 3 Contract Name: \_\_\_\_\_

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

Description:

Attachments: *[List documents supporting change]*

**Purpose for Work Change Directive:**

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

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

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

Contract Price \$ \_\_\_\_\_ [increase] [decrease].  
 Contract Time \_\_\_\_\_ days [increase] [decrease].

**Basis of estimated change in Contract Price:**

- Lump Sum  Unit Price
- Cost of the Work  Other

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By:	By:	By:
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title:	Title:	Title:
Date:	Date:	Date:

Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

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Change Order No. \_\_\_\_\_

Date of Issuance:	Effective Date:
Owner: Lincoln County	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: W.K. Dickson & Co., Inc.	Engineer's Project No.: #20170294.00.CL
Project: Killian Creek WWTP Upgrade Phase 3	Contract Name:

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

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Title: \_\_\_\_\_

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Field Order No. \_\_\_\_\_

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Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_  
Owner: Lincoln County Owner's Contract No.: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
Engineer: W.K. Dickson & Co., Inc. Engineer's Project No.: #20170294.00.CL  
Project: Killian Creek WWTP Upgrade Phase 3 Contract Name: \_\_\_\_\_

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Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, 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(s) Drawing(s) / Detail(s)

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Description:

Attachments:

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ISSUED:	RECEIVED:
By: _____ Engineer (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____
Date: _____	Date: _____

Copy to: Owner

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DOCUMENT 00 91 13  
ADDENDUM (SAMPLE)

Lincoln County  
Killian Creek WWTP Upgrade Phase 3  
WKD Project Number #20170294.00.CL

ADDENDUM NUMBER [ ]

**[Date Prepared]**

BID DATE: [Month, Day], [Year] [a.m.] [p.m.]

TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated [ ] and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

**Specifications**

Item 1: [Document Title]

Item 2: [Document Title]

Item 3: [Document Title]

Item 4: [Document Title]

**Drawings**

Item 5: [Document Title]

Item 6: [Document Title]

**Clarifications**

Item 7: [Document Title]

Item 8: [Document Title]

Item 9: [Document Title]

Item 9: [Document Title]

Receipt of this addendum must be acknowledged on Page [00 41 13-1] [00 41 43-1] of your Bid Form.

Sincerely,

**W. K. Dickson & Co., Inc.**  
N.C. License F-0374

**SEAL**

[Project Manager Name]  
Project Manager

/[Initials of typist]

Enclosures [If applicable]