

RE-ADVERTISEMENT FOR BIDS

Sealed proposals will be received in the Office of the Buyer II, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 2:00 PM (EDST) on July 10, 2014 and immediately thereafter publicly opened and read for the Construction Services related to the Satellite LNG Facility Phase IIB Expansion project in Greenville, NC.

Instructions for submitting bids will be available in the Office of the Buyer II, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina during regular office hours, which are 8:30 AM – 5:00 PM Monday through Friday and at <http://www.guc.com/doing-business-with-us>. Drawings will be electronically available from the Engineer, Northstar Industries, at <sftp://gate.northstarind.com/Outbox/GRN/GRN-0057 PHASE IIB BID PACKAGE/> and by using the following login and password:

Login name: greenville

Password: grn42014

Additional instructions on accessing Northstar's FTP site can be found in the attached Specifications.

Greenville Utilities Commission reserves the right to reject any or all bids.

BID DOCUMENTS

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GREENVILLE UTILITIES COMMISSION

GREENVILLE, NORTH CAROLINA

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SECTION I

INSTRUCTIONS FOR FORMAL BIDS

CONSTRUCTION SERVICES RELATED TO THE **SATELLITE LNG FACILITY PHASE IIB EXPANSION**

1.0 NOTICE TO BIDDERS

Sealed Bids, subject to the conditions made a part hereof, will be received in the Office of the Buyer II, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 2:00 PM (EDST) on July 10, 2014 the day of opening. **Bids submitted in a fax or e-mail in response to this Invitation for Bids will not be acceptable.**

2.0 STANDARD FORMS REQUIRED

Each Bidder must submit a Bid on the enclosed bid forms. **The Bid must be signed by an authorized official of the firm. Return only the attached Bid Form. Do not return the Advertisement for Bids, Instructions to Bidders or Specifications.**

3.0 PREPARATION OF BID

Bids must be in sealed envelopes clearly marked on the outside with the name of the Bid and the Bid opening date and time. Bid shall be addressed to BUYER II, GREENVILLE UTILITIES COMMISSION, 401 S. GREENE STREET, GREENVILLE, NORTH CAROLINA 27834.

4.0 OPENING OF BIDS

Bids will be opened promptly and read at the hour and on the date set forth in the advertisement in the Office of the Buyer II, Greenville Utilities Main Office, 401 S. Greene Street, Greenville, North Carolina. Bidders or their authorized agents are invited to be present.

All Bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but GUC may, in its sole discretion, release any Bid and return the Bid security prior to that date.

5.0 PRE-BID MEETING

A pre-bid meeting will not be held. A site visit to the Satellite LNG Facility may be arranged by contacting John Daughton, Gas System Supervisor, at (252) 551-1485, daughtjp@guc.com.

6.0 BID SECURITY

Each Bid must be accompanied by Bid security made payable to Greenville Utilities Commission (GUC) in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond (on form attached) issued by a surety meeting the requirements of Paragraph 5.01 of the General Conditions.

The Bid security of Successful Bidder will be retained until such Bidder has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within fifteen (15) days after the Notice of Award, GUC may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom GUC believes to have a reasonable chance of receiving the award may be retained by GUC until the earlier of the seventh (7th) day after the Effective Date of the Agreement or the sixtieth (60th) day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within seven (7) days after the Bid opening, if requested by Bidder.

7.0 NC SALES TAX

Do **not** include NC sales taxes in Bid figure; however, GUC does pay sales tax. Sales tax should be added to the invoice as a separate item.

8.0 FEDERAL EXCISE TAX

GUC is exempt from Federal Excise Tax and will issue a Federal Exemption Certificate upon request to the successful bidder.

9.0 EXCEPTIONS TO BE CLEARLY STATED

If Bid is not in strict accordance with Section II, "Specifications," Bidder must list or note all exceptions on the attached **Exception/Variation Form**, otherwise, it is fully understood that the successful Bidder will furnish services and equipment and/or materials exactly as specified. GUC reserves the right to accept or reject bids with noted minor deviations from specifications and to determine the lowest responsible, responsive Bid from the standpoint of quality, performance, and price.

10.0 EVALUATION AND AWARD OF BIDS

GUC reserves the right to reject any and all bids, to waive any and all informalities, and to disregard all nonconforming or conditional Bids or counter proposals. In evaluating Bids, GUC shall consider whether the Bids comply with the prescribed requirements, plus all alternates or options requested. GUC reserves the right to include or exclude any option or alternative in GUC's opinion is in GUC's best interests. If a Bid is to be awarded, it will be awarded to the lowest responsible, responsive bidder whose evaluation by GUC indicates that the award will be in GUC's best interests. Only firm prices will be considered for award of this Bid.

GUC will not tolerate any drug or alcohol use which imperils the health and wellbeing of its employees and the public it serves. GUC vigorously complies with the requirements of the Department of Transportation (DOT) Anti-Drug Program pursuant to the Pipeline Safety Regulations, CFR Title 49, Part 199. In addition, all Contractors are required to provide drug testing, education, and training as required by Part 199. The successful Bidder shall deliver to GUC within ten (10) days after Notice of Award, evidence of compliance with CFR title 49, part 199 of the DOT Pipeline Safety Regulations as required above.

11.0 NUMERICAL ERRORS

In the case of a discrepancy between a unit price and the extension (the unit price multiplied by the number of units), the unit price governs. In the case where numerical bids are stated both in numbers and in words, the words govern.

12.0 EXAMINATION OF CONTRACT DOCUMENTS AND SITE

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

1. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including "technical data" attached);
2. To visit the site to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;
3. To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
4. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data; and
5. To promptly notify Engineer of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.

13.0 BID WITHDRAWAL

A Bidder must notify GUC in writing of its request to withdraw a bid within seventy-two (72) hours after the Bid opening, not including Saturdays, Sundays, or holidays. In order to justify withdrawal, the Bidder must demonstrate that a substantial error exists and that the Bid was submitted in good faith.

14.0 QUALIFICATIONS OF BIDDERS

To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit after Bid opening upon GUC's request detailed written evidence such as financial data, previous experience, present commitments and other such data as may be called for. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.

15.0 MINORITY BUSINESS PARTICIPATION PROGRAM

GUC has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE) Program. Bidders submitting a Bid are attesting that they also have taken affirmative action to ensure equality of opportunity in all aspects of employment, and to utilize M/WBE suppliers of materials and/or labor.

16.0 CONTRACT TIME

The number of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the term "Contract Times" is defined in paragraph 1.01.A.14. of the General Conditions) are set forth in the Agreement.

17.0 SITE AND OTHER AREAS

The site which the Work is to be performed and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by GUC unless otherwise provided in the Contract Documents.

18.0 SUBCONTRACTORS, SUPPLIERS AND OTHERS

GUC may require the Bidder to identify Subcontractors, Suppliers and other persons and organizations that will be performing major portions of the Work associated with this Project. If requested by GUC, Bidder must be prepared to submit after Bid opening a list of all such Subcontractors, Suppliers and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by GUC. GUC or Engineer who after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, may before the Notice of Award is given request apparent Successful Bidder to submit an acceptable substitute, without an increase in Bid price.

If apparent Successful Bidder declines to make any such substitution, GUC may award the contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person or organization listed and to whom GUC or Engineer does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to GUC and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom Contractor has reasonable objection.

19.0 CONTACT INFORMATION

Questions regarding this Bid request should be directed to GUC to Carl Smith, Gas Distribution Engineer at (252) 551-1492, smithch@guc.com or Cleve Haddock, Buyer II at (252) 551-1533, haddocgc@guc.com, or to Northstar Industries (Engineer) to Tom High, Project Engineer at (978) 975-5500 ext. 324, thigh@northstarind.com.

Interpretations or clarifications considered necessary by GUC in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten (10) days prior to the date

for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Addenda may also be issued to modify the Bidding Documents as deemed advisable by GUC or Engineer.

20.0 CONTRACT DOCUMENTS

The attached Contract Documents in Section III apply to all services procured by GUC and must be considered as part of the Bid.

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SECTION II
SPECIFICATIONS FOR THE
CONSTRUCTION SERVICES RELATED TO THE
SATELLITE LNG FACILITY PHASE IIB EXPANSION

SCOPE OF WORK

1.0 BACKGROUND

The Greenville Utilities Commission's (GUC) facility is an existing satellite LNG storage and peak shaving facility. It was placed in service in 1997 and currently provides storage and vaporization services to customers in the Greenville, NC area.

The LNG facility is currently undergoing a second phase of expansion. The first phase (which has been completed in 2001) consisted of installation of two (2) additional 55,000 gallon LNG storage tanks (tanks "C" & "D") in parallel with the original two (2) LNG storage tanks (tanks "A" & "B"), construction of a remote impoundment for the two (2) new tanks, installation of a new control building adjacent to the original control/process building, relocating the existing control room components to the new control building, expanding the telephone/paging, security, and fire and gas detection, and DC power systems, upgrading the SCADA system, expanding the site perimeter and process area lighting and installing a standby electrical generator. Also included as part of the first phase were the extension of the perimeter road and some modifications to the fire water system.

The second phase was split into two sub-phases, Phase IIA and Phase IIB. The Phase IIA Expansion (which was completed in 2006) consisted of adding a second LNG vaporizer, two (2) additional water/glycol heaters, an upgraded water/glycol pump skid, an upgraded instrument air compression system, and the necessary expansion of the fire and gas detection, electrical, and control systems.

The present Phase IIB Expansion will consist of the installation of two (2) additional 55,000 gallon LNG storage tanks (tanks "E" & "F") to bring the total number of tanks on site to six (6) along with the construction of a third LNG remote impoundment area for the two (2) new tanks and the necessary expansion of the fire and gas detection, electrical and control systems. In addition a 2nd LNG trailer unloading station with skid mounted pump will be added to the facility and the existing stand-by generator and automatic transfer switch will be replaced with larger capacity units. Some modifications to the water/glycol heaters outlet piping and the instrument air, and the installation of an utility air system are also included.

This Scope of Work and the Drawings attached will address the Phase IIB aspects of all electrical, mechanical and civil installation and demolition work to be provided by the Contractor except as specifically excluded in the Contract Documents.

2.0 WORK INCLUDED

Furnish supervision, labor, equipment, materials and services for the complete procurement, receiving, handling, storage, protection, installation (or erection), inspection and testing as

required by the Contract Documents and Drawings. The Work shall include all that is necessary for a complete, in place, approved installation, ready for operation by the Owner. This includes, but is not limited to the following:

A. General

1. Provide all submittals and obtain all approvals as required by the Specification.
2. Provide all shop drawings required by all sections of this specification.
3. Obtain the required contractor permits

B. Tasks Included

1. Addition of two (2) LNG storage tanks (supplied by Owner) including new foundations, offloading and setting with cranes, grounding, lightning protection, and connecting piping.
2. Addition of a 2nd LNG trailer unloading station including LNG pump (supplied by Owner), structural steel skid support frame with valves, piping, and instrument panel. Relocation of remote digital displays and valve controls for tank "D" from the existing unloading station panel to the new unloading station panel.
3. Addition of a 3rd reinforced concrete remote impoundment basin with sump pump.
4. Installation of a 3" stainless steel butt weld isolation valve in the existing LNG fill header between tanks "C" and "D".
5. Installation of a 2" stainless steel butt weld isolation valve in the existing vapor header between tanks "C" and "D".
6. Installation of stainless steel flange and valve bonnet spray shields on flanged joints, valve bonnet flanges, and valve stem packing at the fronts of all six (6) LNG storage tanks (Drake Specialties or approved equal).
7. Installation of a new standby generator and automatic transfer switch (both supplied by Owner) including new foundation and wiring including removal of the existing equipment.
8. Installation of five (5) Taco Multipurpose Valves on the water/glycol heater outlet lines (4" carbon steel) including differential pressure gages.
9. Installation of new fire & gas detectors in the area of the new LNG storage tanks and new LNG trailer unloading station.
10. Installation of new valve access platforms in front of the four (4) existing and two (2) new LNG storage tanks.
11. Replacement of the process area and tank area instrument air hoses with stainless steel tubing and extension of the stainless steel instrument air lines to tie in the new LNG storage tank valves, new LNG trailer unload station panel and added Emergency Shut Down (ESD) stations.

12. Installation of a new 1" stainless steel utility air line from utility air compressor in heater room of process building to the new LNG storage tank "F" including the installation of taps with isolation valves and quick connects in front of each LNG storage tank (actual locations to be determined in the field).
13. Installation of a reinforced concrete pad in front of existing LNG storage tanks "A" and "B".
14. Installation of all new electrical and instrumentation required for the new systems.

3.0 SUBSURFACE CONDITIONS

- A. Geotechnical borings conducted in the vicinity of the proposed work area were conducted in 1997. Available boring logs from 10 borings are included as an Attachment to this Scope of Work. Also include is a site plan showing relative location of bore holes to proposed installation.
- B. It should be understood that the results of the geotechnical investigations apply only to the conditions reported at the indicated borehole, to the depths reported and at the time the explorations were made.
- C. The existing structures and utilities which are adjacent to and within the limits of the scope of work areas are identified as completely as the available information allows and shall be protected against damage. The Contractor shall be fully responsible to the Owner in the event of removal or damage of any existing objects that are intended by the Owner to remain in place. In the event the Contractor uncovers any unmarked or unknown structure or utility during excavation, he shall report his findings to the Engineer and shall receive instructions before proceeding further. If the Engineer deems it necessary to award an extra it will be awarded in writing with the approval of the Owner prior to continuing or it will not be considered upon completion.

4.0 WORK NOT INCLUDED

- A. Work of the Project executed separately from this Contract, and which is specifically excluded from this Scope of Work includes the following:
 1. Installation of overhead shelters at the new and existing LNG trailer unloading stations.
 2. Painting of the two (2) new LNG storage tanks.
 3. Installation of new controls and a master control for the existing (5) water/glycol heaters.

5.0 EXTENT OF THE WORK

The extent of the Work is shown on the Engineers' Drawings provided and such other documents or drawings as may hereafter be furnished or approved by the Engineer to explain the Work in greater detail.

6.0 REFERENCED DOCUMENTS

Specification sheets included in the attached Drawings refer to codes, standards, and other documents, which establish product, installation, and quality standards of industry recognized associations and institutes. These documents, together with the documents they reference, shall be considered part of this specification. If there is, or seems to be, a conflict between this specification and a referenced document, the matter shall be referred to the Engineer.

Specification sheets usually give the specific date of referenced documents. If a date is not specified, the date is that of the specific code in effect as of the date of the Advertisement for Bids.

7.0 DEFINITIONS

A. The word “Owner” shall refer to the Greenville Utilities Commission (GUC), Greenville, North Carolina.

B. The word “Engineer” shall refer to an authorized representative of Northstar Industries, LLC who shall act as agent for GUC.

C. The word “furnish” shall mean to supply, deliver to the job site, unload, and be responsible for until Completion and Acceptance under the Contract Documents. The Contractor shall, unload and be responsible for material and equipment which is to be installed under this Scope of Work but which is supplied by the Owner or supplied under another Section of the Specifications.

D. The word “provide” shall mean furnish, install, wire, connect and test complete in place to the satisfaction of the Purchaser and Authority Having Jurisdiction under this Section.

E. The word “install electrical connections by” shall mean wire, connect, and test complete in place to the satisfaction of the Engineer and Authority Having Jurisdiction under this Section.

F. Words “directed”, or “approved” or similar wording shall be understood to mean that direction or approval of the Engineer in writing is intended.

G. The words “required”, “necessary” or similar wording shall mean those elements of construction which are normally incorporated into the Work wherever required or necessary for function, safety, strength, appearance, or other considerations of sound construction and good standard electrical practices; and to provide, manufacture, test, and fabricate all work, material, and equipment in accordance with federal, state, and local laws, standards, and codes including but not limited to the standards and requirements of the organizations and others listed under this Scope of Work and the Project Drawings and Specifications.

H. The word “manufacturer” or “manufacturers” shall include the manufacturer, the manufacturer’s representative, the distributor, the fabricator, and the supplier of the particular classification of equipment, system, product, and material.

I. The word “system” shall mean an operating entity consisting of one or a multiplicity of items or components, with performance as specified.

J. Definition of electrical and electronic terms shall be as defined by the IEEE Standard 100 and the National Electric Code (NEC), with NEC definitions taking precedence.

8.0 OWNER PURCHASED PRODUCTS

A. Certain equipment will be purchased by the Owner, identified as such on the drawings and other contract documents shall include but not limited to:

1. LNG Storage Tanks “E” and “F” with attached piping and valves per Vendor Drawing V1.
2. LNG Pump for new LNG trailer unloading station per Vendor Drawing V2.
3. New Stand-by Generator and Automatic Transfer Switch.

B. The Contractor shall include the cost of all work associated with equipment furnished by the Owner, including conduit power wiring, control wiring, alarm wiring, and final electrical connections as indicated in the Drawings.

1. Engineer will arrange for and deliver Product Data to Contractor.
2. Owner will arrange for and pay for delivery of Owner purchased items according to Contractor's Construction Schedule.
3. After delivery, Engineer will inspect delivered items for damage. Contractor shall be present for and assist in the Engineer's inspection.
4. If Owner purchased items are damaged, defective, or missing, Owner will arrange for replacement.
5. Engineer will furnish Contractor the earliest possible delivery date for Owner purchased products. Using Engineer furnished earliest possible delivery dates, Contractor shall designate delivery dates of Owner purchased items in Contractor's Construction Schedule.
6. Contractor shall review Product Data, noting discrepancies or anticipated problems in use of product.
7. Contractor is responsible for receiving, unloading, and handling Owner purchased items at Project site.
8. Contractor is responsible for protecting Owner purchased items from damage during storage and handling, including damage from exposure to the elements.
9. If Owner purchased items are damaged as a result of Contractor's operations, Contractor shall repair or replace them.

9.0 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Contractor shall accept delivery, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft, and will comply with manufacturer's written instructions.

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
5. Store products to allow for inspection and measurement of quantity or counting of units.
6. Store materials in a manner that will not endanger Project structure.
7. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
9. Protect stored products from damage.

B. Storage: Contractor shall provide a secure location and enclosure at Project site for storage of materials and equipment, and will coordinate location with Engineer.

10.0 SUBMITTALS

Contractor shall submit shop drawings, product data, certificates, samples and other submittals as required by individual Specifications and Drawings.

11.0 QUALITY ASSURANCE

A. The Contractor shall impose on each subcontractor, the applicable requirements of this Specification. He shall be directly responsible to assure that his subcontractors are completely aware of these requirements, and that all items and services provided meet specified requirements.

B. The Contractor shall promptly document and notify the Engineer of all deviations and nonconformance's to this Specification, Drawings, referenced documents, or Contractor documents approved by the Engineer. No deviation or nonconformance from these documents shall be binding until approved by the Engineer in writing.

C. The Contractor shall obtain the necessary permits for construction and approval of the plans by the appropriate authorities and shall obtain all other permits, licenses or certificates of approval, arrange for all inspections, and pay for all fees and charges connected therewith.

D. The electrical work shall be executed in full accordance with the current rulings of the specified edition of the NEC, and all rulings by state, utility, and local authorities. Where codes

conflict, the more stringent shall apply. Any changes necessary to the Drawings and Specifications, as submitted for Bid, required to make conformity to any of the required state, utility, or local authorities shall be called to the attention of the Engineer before submission of the Bid. Otherwise the Contractor shall be held responsible for all work necessary for an Approved installation. Where the specification requirements exceed the requirements of these authorities, codes, and standards, the specification requirements shall prevail.

E. No work shall be covered or concealed before examination and approval by the Engineer's Resident Project Representative and by all inspectors and Authorities Having Jurisdiction. The Contractor shall replace any imperfect or condemned work with work conforming to requirements and satisfactory to the Engineer without extra cost to the Owner. If any work is covered or concealed before due inspection and approval, the Contractor shall pay all costs of uncovering and reinstating such work.

F. The Contractor shall report to the Engineer promptly, in writing, whenever plans or specification are believed to be at variance with these requirements and shall not proceed with such work until further instructed by the Engineer.

G. Electrical components, devices, and accessories shall be listed and labeled as defined in NFPA 70, Article 100 by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

H. All piping materials and equipment in natural gas, LNG or LNG vapor service shall be provided with material test reports (MTR's) and/or certificates of conformance (COC) identifying their conformance with material specifications in the Project Drawings. Contractor shall be responsible for maintaining on the job site a neat and orderly file of MTR's and COC's. Engineer shall review for conformance all such documentation.

I. Contractor shall provide to Engineer all applicable welding procedures and welder qualification documentation intended to be used to perform the Work. Engineer shall approve all welding procedures and welders proposed to be used on the Project.

J. Contractor shall be responsible for coordinating all testing and maintaining on the job site a neat and orderly file of all testing personnel qualifications, testing procedures and testing results including, but not limited to pipe welding non-destructive examination (NDE) reports, pipe pressure test reports, electrical loop checking, etc. Engineer's Resident Project Representative shall witness all such testing and approve all testing documentation submitted by the Contractor.

K. At the conclusion of work, the Contractor shall prepare a QA/QC booklet containing all documentation required to be maintained under paragraphs H, I and J above. Engineer shall review and approve all such documentation to make sure that it is in order and covers all of the work performed by the Contractor.

12.0 REGULATORY REQUIREMENTS

All applicable Federal, State, and local codes, laws and requirements shall govern this work and be considered minimum requirements including:

1. US DOT 49 CFR Part 193
2. NFPA 59A (as referenced in US DOT 49 CFR Part 193)
3. US DOT 49 CFR Part 192
4. The North Carolina State Building Code
5. DOT Drug Testing Program
6. OSHA
7. Additional codes, etc., invoked by the other sections of this specification.

13.0 PRODUCT HANDLING

A. The quality of equipment, materials and parts shall be maintained during manufacturing, shipping, receiving, storage, installation and turnover to prevent or minimize damage, deterioration, and contamination.

B. In general, specific requirements for appropriate packaging, shipping, storage, handling and preventive maintenance methods to maintain the quality of products, are given in individual Specification sections.

C. All documentation and unused accessories received with all materials and equipment shall be delivered promptly to the Engineer's Resident Project Representative.

14.0 TEMPORARY LIGHTING AND POWER DURING CONSTRUCTION

If required, the Contractor shall provide temporary electric service of sufficient capacity from the existing electrical system to supply the electric light and power requirements for the total Work of the Project. The Contractor shall be responsible for any applications and permits required for the temporary electric service.

A. All necessary protective devices, transformers, cables, panelboards, lamps, switches, grounding, ground fault protection, and associated equipment shall be provided by the Contractor.

B. Temporary lights shall be based on a minimum of one watt per square foot in incandescent lighting, except where higher lighting levels are required by OSHA, codes or standards, or specified, in which case the wattage shall be increased to provide the higher lighting levels. Sufficient wiring, outlets and lamps shall be installed to insure proper lighting in rooms, spaces, stairs, egress, and passage areas. The minimum size incandescent lamp used shall be 100 watt.

C. The Contractor shall provide temporary feeders of sufficient capacity for all work areas, covering the entire length and width of each area of construction or demolition. The Contractor

shall provide sufficient numbers of outlets, located at convenient points, so that extension cords not over 50 feet will reach all work requiring light or power. Where the work to be performed under another Section requires extension cords, sockets, lamps, motors, and for all temporary wiring of construction offices, all such work shall be provided under that Section.

D. The Owner will pay for the cost of electrical energy consumed under all Sections, including any demand and fuel charges.

E. Temporary wiring of a special nature for light, safety, and power other than stated above, shall be provided under the Section requiring the wiring.

F. Temporary work shall be completely removed after it has served its purpose. This requirement includes all cables, conduit, panelboards, switches, wiring, temporary supports, etc.

G. Incandescent lamps installed in permanent lighting fixtures and used for lighting during construction shall be replaced just prior to the date of Substantial Completion.

15.0 COORDINATION

A. In accordance with requirements of this Section, the Contractor shall furnish and keep on the job at all times, one (1) complete and separate set of redline prints of the work on which shall be clearly noted, promptly as the work progresses, all changes, revisions, and additions to the Work. Wherever the work is installed otherwise than as shown on the Contract Drawings after approval by the Engineer such changes shall be noted.

B. At the conclusion of work, the Contractor shall prepare Record Drawings in accordance with the contract requirements. Record drawings shall indicate embedded conduit routing, and the correct circuit numbers and panel identification as actually installed.

C. Coordinate work of the various sections of the Specification to ensure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.

D. Coordinate work and area access with Engineer's Resident Project Representative.

E. Verify existing conditions and characteristics of interrelated work to ensure compatibility; coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such items.

16.0 FIELD ENGINEERING

A. The Contractor shall furnish and keep on the job at all times, one (1) complete and separate set of black-line prints of the work on which shall be clearly noted, promptly as the work progresses, all changes, revisions, and additions to the Work. Wherever the work is installed otherwise than as shown on the Contract Drawings after approval by the Engineer such changes shall be noted.

1. The Contractor shall indicate daily progress on these prints by marking the various pieces of equipment, piping, and associated appurtenances as they are installed.

2. No approval of a requisition for payment for work installed will be given unless supported by record prints as required above.

B. At the conclusion of work, the Contractor shall provide detailed, dimensioned “As-Built” drawings of all aboveground facilities installed or encountered during installation in the form of one (1) set of red-lined prints.

C. Contractor shall establish grades, lines, and levels as needed to complete specified work, by use of recognized engineering survey practices. The control datum for survey is that established by the Owner’s survey and shown on the drawings.

D. Contractor shall preserve permanent benchmarks, stakes, and other reference points, and if disturbed, replace according to Engineer’s instructions at no cost to Owner.

E. Contractor shall provide Engineer adequate timeframe to perform detailed, dimensioned “As-Built” field drawings of all underground facilities installed or encountered during installation in the working limits of the project.

F. Contractor shall verify all dimensions to and between existing structures/connection points before proceeding with final detailing and/or fabrication.

17.0 PROHIBITIONS OF ASBESTOS

Products which contain asbestos are prohibited. This prohibition includes items such as packings or gaskets even though the item is encapsulated or the asbestos fibers are impregnated with binder material.

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ATTACHMENT

Report of Subsurface Investigation

Proposed GUC Gas LNG Facility

Greenville, North Carolina

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June 2, 1997

Greenville Utility Commission Gas Dept.
c/o Rivers & Associates, Inc.
107 E. Second Street
Greenville, NC 27835

Attention: Mr. Anthony Miller, GUC
Mr. Derk Tyson, Rivers & Asso.

Reference: Report of Subsurface Investigation
Proposed GUC Gas LNG Facility
Greenville, North Carolina
GeoTechnologies Project No. 2-97-0045-EA

Gentlemen:

GeoTechnologies, Inc. has completed the authorized subsurface investigation to evaluate site grading and foundation support considerations for a proposed liquid natural gas facility to be constructed in Greenville, North Carolina. Subsurface conditions at the site were investigated by drilling 10 test borings at approximate locations shown on the attached Figure 1. These locations were established in the field by Rivers & Associates survey personnel and the indicated locations should be considered accurate. The borings were advanced to termination depths ranging from 15 to 30 feet below existing site grade utilizing standard penetration test procedures at selected intervals to evaluate the consistency and density of the subsurface soils. This report presents the findings of the investigation and our recommendations for site grading and foundation support.

PROJECT AND SITE DESCRIPTION

It is our understanding that a new LNG storage facility will be constructed off of SR 1534 near an existing gas facility in Greenville, North Carolina. The site is a cleared field containing approximately six acres which is relatively level with estimated topographic relief on the order of no more than 2 to 3 feet. It is our understanding that the new project will consist of the installation of two liquid natural gas tank modules having a capacity of 55,000 gallons each and an adjacent administration building. The tanks will be supported on saddle type foundations carrying an estimated 200 kips at each end. Additionally, containment dikes will be constructed around these tanks as part of the design. In the future, two additional modules may be added and the entire

facility will be ringed by an access road which will provide access to the tanks for transfer of product into those tanks. Based on information provided to us, minor regrading will be performed with site grades being raised as much as 3 to 4 feet in some areas to achieve the desired finished subgrade elevation for the new project.

SUBSURFACE CONDITIONS

Generalized subsurface profiles developed from the test boring data are attached to this report as Figures 2 and 3 to graphically illustrate subsurface conditions encountered at this site. More detailed descriptions of the conditions encountered at the individual test boring locations are then presented on the attached test boring records.

The subsurface profile on this site was found to typically consist of a near surface veneer of topsoil generally less than 6 inches in thickness underlain by a layer of loose slightly silty to clean sand exhibiting penetration resistances in the range of 7 to 10 blows per foot extending from beneath the topsoil typically to a depth of about 3 feet below existing site grade. Below a depth of 3 feet, the sands generally became firmer typically exhibiting penetration resistances in the range of 10 to 28 blows per foot except for a few zones of looser sand exhibiting resistances in the range of 6 to 10 blows per foot. These deeper sands also were generally classified as slightly silty to clean except for a few zones of clayey sand encountered near the surface of the stratum. The deeper borings generally encountered a stratum of moderately to highly plastic clayey silt generally exhibiting penetration resistances in the range of 10 to 27 blows per foot below a depth of 20 feet to the maximum depth of the borings. Slightly less firm silts were encountered near the top of the stratum at test locations B-8 and B-9 where the material exhibited penetration resistances of 7 to 8 blows per foot when initially encountered.

Stabilize groundwater measurements were obtained in several of the borings and indicate that groundwater is generally present at about elevation 11 to elevation 13 (a depth of 7 to 9 feet below existing grade) at the time of the investigation. Those boreholes where groundwater levels are not shown caved and were dry at the time of the investigation and stabilized water levels were not obtained in those borings. However, had the boreholes remained open, we anticipate that the water levels would have occurred at an elevation of about 11 to 13. However, it should be recognized that groundwater levels will vary with seasonal and climatic changes and that they could be somewhat higher or lower at other times of the year.

RECOMMENDATIONS

The following recommendations are made based upon a review of the attached test boring data, our understanding of the proposed construction, and past experience with similar projects and subsurface conditions. Should site grading or structural plans change significantly from those now under consideration, we would appreciate being provided with that information so that these recommendations can be confirmed, extended, or modified as necessary. Additionally, should subsurface conditions adverse to those indicated by this report be encountered during construction, those differences should be reported to us for review and comment.

Suitability of Site. Subsurface conditions on this site appear to be well suited to the proposed construction. The near surface soils extending to a depth of 20 feet consist predominately of loose to firm sands which should provide adequate support for shallow spread footing foundations and for a conventional pavement structure provided the anticipated settlements are considered to be tolerable. Additionally, it is anticipated that the near surface soils can be easily worked and compacted to provide a suitable base for the new construction and that those soils will be suitable for reuse as structural fill. Furthermore, the near surface soils consist predominately of relatively clean sands which should be easy to work during periods of both dry weather such as occur during the typically drier summer months and during periods of less favorable weather such as often occurred during the wetter winter months.

Site Grading Considerations. Site grading should initially begin with the removal of topsoil from all areas designated for construction of the new facility. Based on the results of the borings, we anticipate that an average topsoil stripping depth on the order of 6 inches will be required. The removed topsoil materials should be either wasted off site or be stockpiled for reuse in landscaped areas.

Following removal of topsoil, those areas at grade or designated to receive fill should be densified in-place with a heavy vibratory roller having a static weight of not less than 5,000 pounds. The roller should be operated across the areas to be densified making a minimum of three passes in each of two perpendicular directions with the vibratory turned on. Following completion of the surface densification, fill materials excavated from other portions of the site or imported for use as structural fill can be used to raise site grade where necessary. The on-site soils excluding topsoil should be well suited to reuse as structural fill. We recommend that all newly placed fill be compacted to not less than 95% of the standard Proctor maximum dry density (ASTM D-698) except in the final foot beneath paved areas where this requirement should be increased to 98% of the standard Proctor maximum.

It is anticipated that difficult excavation will not be encountered during construction on this site since the property is located within the Coastal Plain Geologic Province and the test borings did not encounter any partially weathered rock or rock to a depth of up to 30 feet. However, shallow groundwater is present existing at depths of 7 to 9 feet below existing site grade. If possible, excavation depths should be maintained to no more than 5 to 7 feet if possible. If excavations must be extended below that depth, the relative clean character of the subsurface sands will necessitate that closely spaced well points or deep wells be utilized to lower groundwater levels in order to allow excavation of stable ditch lines below the groundwater table. If excavations below the groundwater table are anticipated, please provide us with that information and we will perform grain size distribution tests on the deeper sands in order to provide contractors with an estimate of permeability for use in design of dewatering systems. However, based on our past experience in this area of Greenville, and an examination of the soil samples, we anticipate that the flow volumes to a dewatering system will be quite significant if dewatering is required. Alternatively, groundwater could be controlled by installing sheet piling into the moderately to highly plastic silts which exist below a depth of 20 feet or a vibrated beam slurry wall could be used to cut off the recharging of the water and significantly reduce the required volumes of water to be handled by a dewatering system.

Foundation Design Considerations. The subsurface soils which exist to depths of up to 20 feet consist predominately of relatively clean sands which are loose to firm in consistency. Based on the FHA Settlement Estimation Procedure utilizing the soil classification and standard penetration resistance data for three representative test borings across the site, we estimate that the settlement of the anticipated 200 kip saddle foundation loads will be on the order of about one inch for a 2,000 psf to 2,500 psf design bearing pressure (Figures 4 and 5). We further note that these settlements will occur relatively quickly with application of load such that in excess of 80% of the settlement is likely to occur with the initial application of load. As such, if there are sensitive piping connections to the individual tanks, and if the anticipated settlements are considered to be slightly excessive or marginal, completion of the final connections could be delayed until after the initial filling of the tanks, if desired. Settlements following initial loading should be minimal. Subsurface conditions are relatively uniform as illustrated by the predicted settlement graphs and we do not anticipate that differential settlements will exceed half of the estimated total settlements.

Foundation settlements can be reduced by densifying the base of the exposed footings using a vibratory plate tamp or whacker packer after excavation to design subgrade. It should further be recognized that the subsurface soils consist of relatively clean sands and that the foundations may have to be formed due to the instability of the near surface soils to maintain a vertical bank even for relatively shallow cuts for an extended period of time.

If the anticipated settlements are considered to be excessive, the foundations could be supported on light timber piles driven to bear in the underlying sands or into the underlying silts. If the anticipated settlements are considered to be excessive, we will be happy to prepare graphs of estimated pile capacity versus depth for timber piles and for concrete piles if you desire. However, based on past experience with similar facilities, it appears that subsurface conditions are well suited to the use of shallow spread footing foundations and we anticipate that the estimated settlements will be considered acceptable.

The proposed administration building and other light structures may be supported on shallow spread footing foundations designed for a bearing pressure of 2,000 psf to 2,500 psf subject to the restriction that column and wall footings have least dimensions of not less than 24 and 16 inches respectively. These foundations may bear at nominal depth beneath finished exterior grade in either properly compacted structural fill or in approved virgin soils. As in the case of the foundations for the LNG tank, it is recommended that the base of the foundations be densified with a vibratory plate tamp or whacker packer after excavation to densify the loose surface sands which otherwise would likely exist at the base of the footings due to the excavation process. We anticipate that total settlements for lighter structures will be 0.5 inches or less with differential settlements of a quarter inch or less. Any slab-on-grade elements which must be constructed should be designed for an assumed subgrade modulus value of 150 pci.

Miscellaneous Considerations. The subsurface soils which exist on this site should exhibit excellent subgrade CBR values. Our experience has been that relatively clean sands will generally exhibit a design subgrade CBR value on the order of 10%. Additionally, those soils are very well drained and are not susceptible to shrink and swell with significant changes in moisture content. Accordingly, an appropriate pavement design for the project will likely consist of 2 inches of asphalt over no more than 5 inches of CABC base course stone for areas subject to only car traffic such as the car parking stalls and a section consisting of 2 to 3 inches of asphalt over 8 inches of stone for the primary drives subject to channalized car traffic and the truck traffic which will service the facility. If you will provide us with an estimate of the number of trucks which will service the facility each day and an indication of whether or not those trucks are operating at or near the legal load limit, we will be happy to prepare an actual pavement design for the project. In view of the significant truck traffic which will likely operate around the ring road for the facility, it is recommended that an I-1 surface asphalt rather than an I-2 asphalt be used. The I-1 asphalts have much better stability for turning traffic such as the trucks which will operate on the facility.


The pavement subgrades should be reworked and compacted with a vibratory compactor immediately prior to placement of base course stone in order to provide a suitable subgrade for the new roadway. All pavement subgrades should be compacted to not less than 98% of the standard Proctor maximum dry density immediately prior to placement of base course stone. Due to the relatively clean nature of the sands on this site, the contractor may have to end dump the stone and then push the stone into place to provide a stable subgrade for placement of the base course stone. Due to the relatively clean nature of the sands, if an attempt is made to dump the stone and then operate off of the prepared subgrade with rubber tired traffic following initial preparation until the stone can be placed on it, that rubber tired traffic could result in loosening of the prepared subgrade.

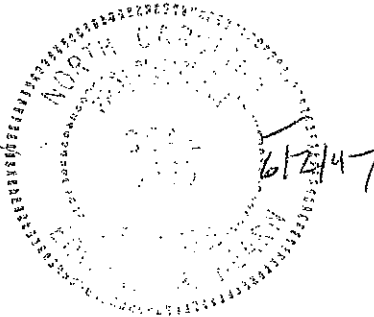
The containment dikes which will be constructed around the tanks likely will be built of the on-site soils. Those soils consist predominately of cohesionless sands which should be stable at slope angles of approximately 2H:1V provided the slopes are protected against erosion with vegetation or by some other means. If permanent maintenance is desired, the slopes should be flattened to 3H:1V or flatter. If steeper slopes are desired, we suggest giving consideration to use of a geotextile material such as BX-1100 Tensar grid appropriately spaced in the exterior embankment slope or to use of cement additives to allow the on-site soils to be constructed at a steeper angle.

GeoTechnologies, Inc. appreciates the opportunity to have provided you with our services on this phase of the project. Please contact us if you should have questions regarding this report or if we may be of any further assistance.

Very truly yours,

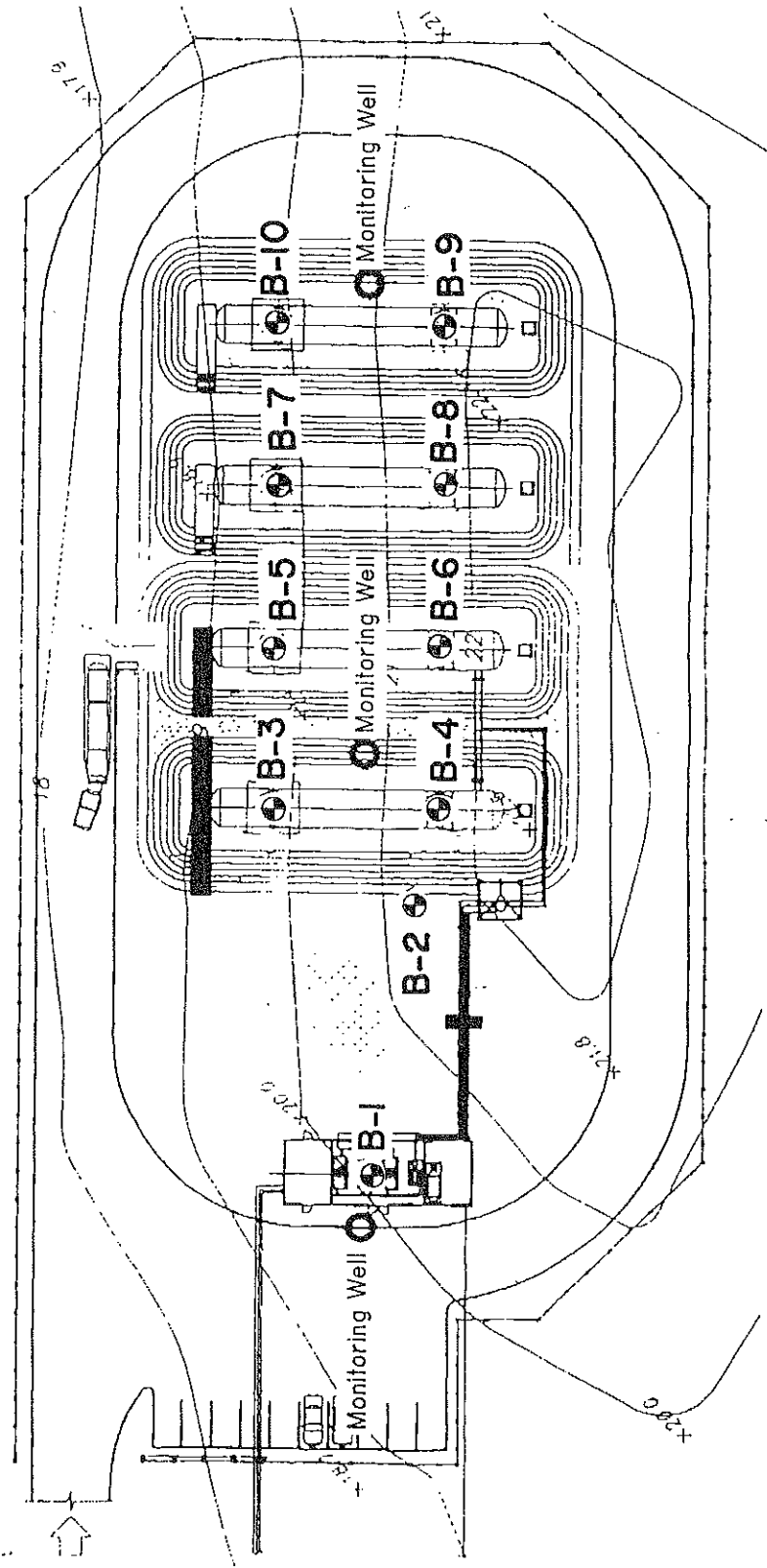
GeoTechnologies, Inc.


Edward B. Hearn, P.E.
NC Registration No. 9520



Blaine Humphrey, E.I.T.
Staff Engineer

EBH/stl



PROJECT:

LNG Gas Storage Facility
Greenville, North Carolina



SCALE: Not to Scale

JOB No: 2-97-0045-EA

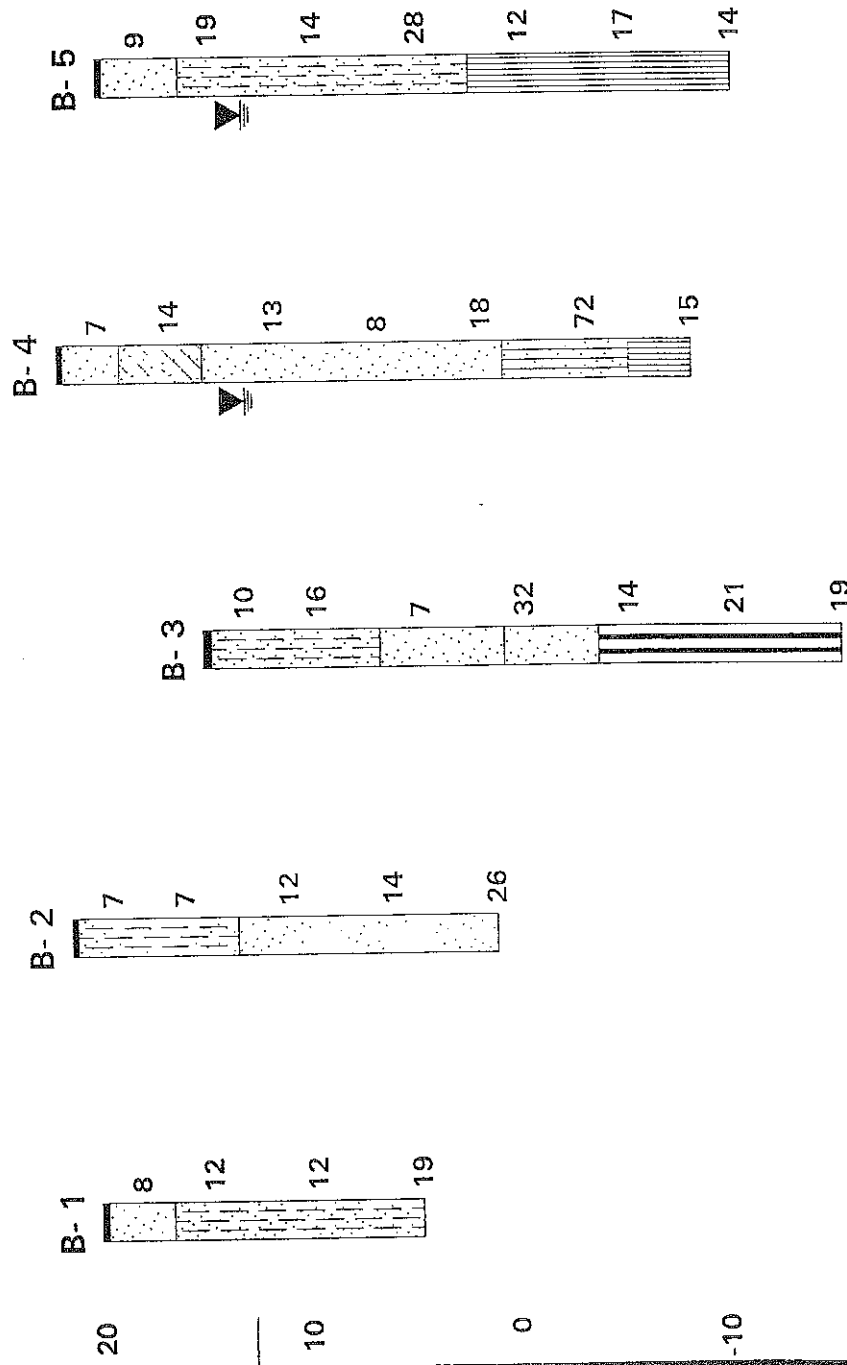
FIGURE No: 1

Elevation (Feet)

GENERALIZED SUBSURFACE PROFILE

LEGEND

- Topsoil
- Clean Sand
- Slightly Silty Sand
- Clayey Sand
- Silty Sand
- Low Plasticity Silt
- Moderate to High Plasticity Silt
- 8- Standard Penetration Resistance
- Groundwater after 24 hours



SCALE: As Shown

JOB No: 2-97-0045-EA

FIGURE No: 2

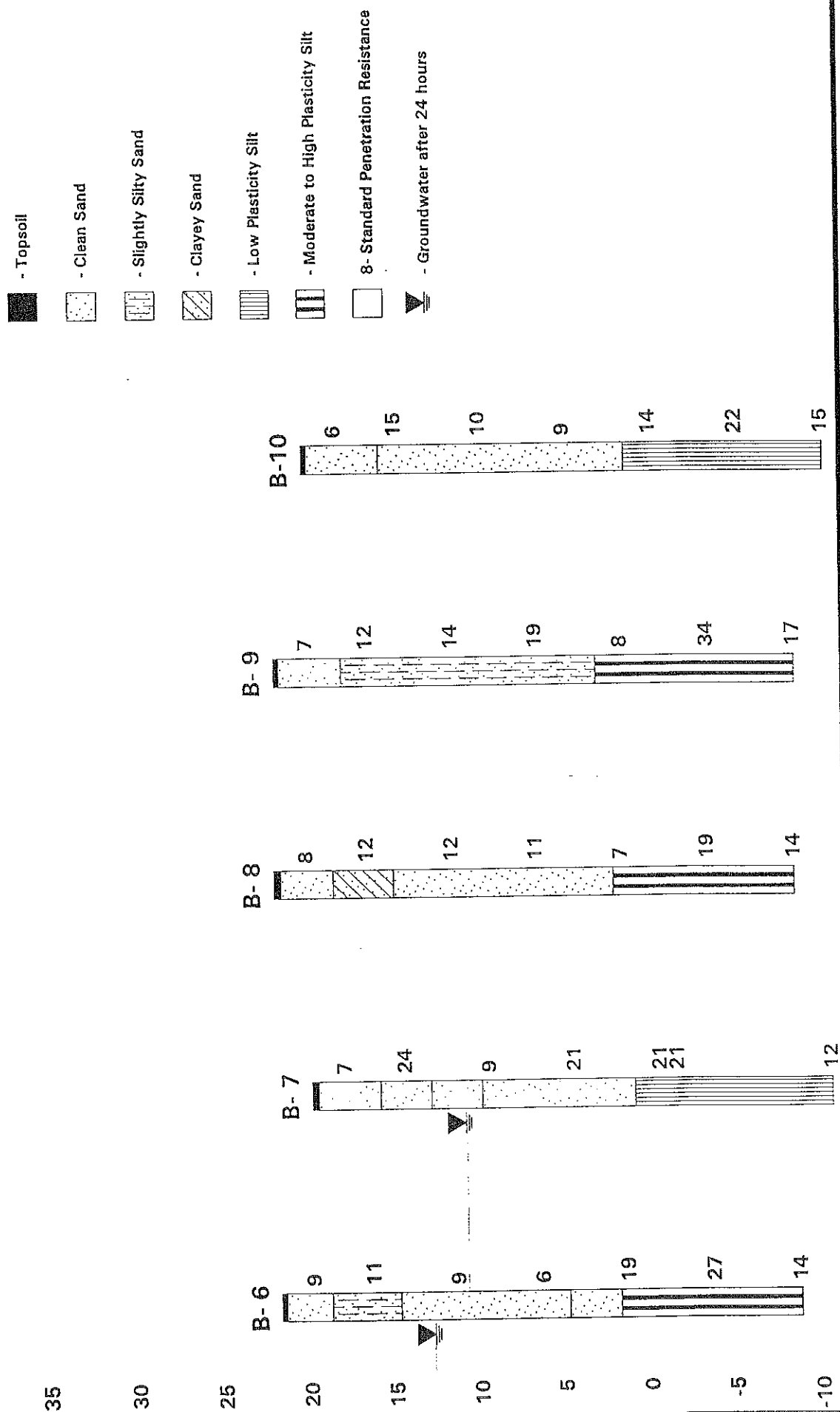
PROJECT:

LNG Gas Storage Facility
Greenville, North Carolina



Elevation (Feet)

LEGEND



SCALE: As Shown

JOB No:2-97-0045-EA

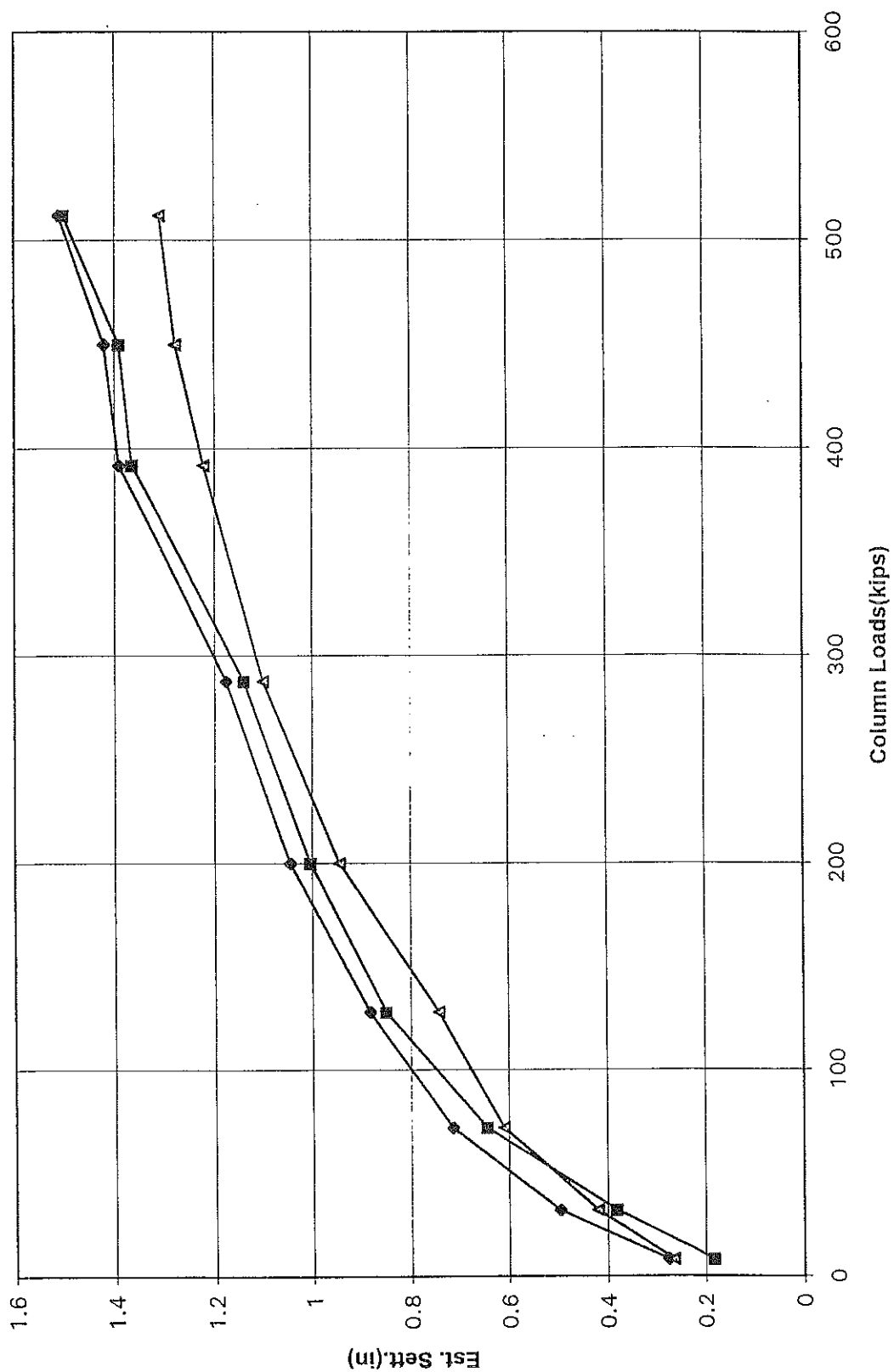
FIGURE No:3



PROJECT:

**LNG Gas Storage Facility
Greenville, North Carolina**

ESTIMATED SETTLEMENT vs COLUMN LOAD FOR INDICATED BORING LOCATIONS



Assumes 2000 psf contact stress

FIGURE 4

ESTIMATED SETTLEMENT vs COLUMN LOAD FOR INDICATED BORING LOCATIONS

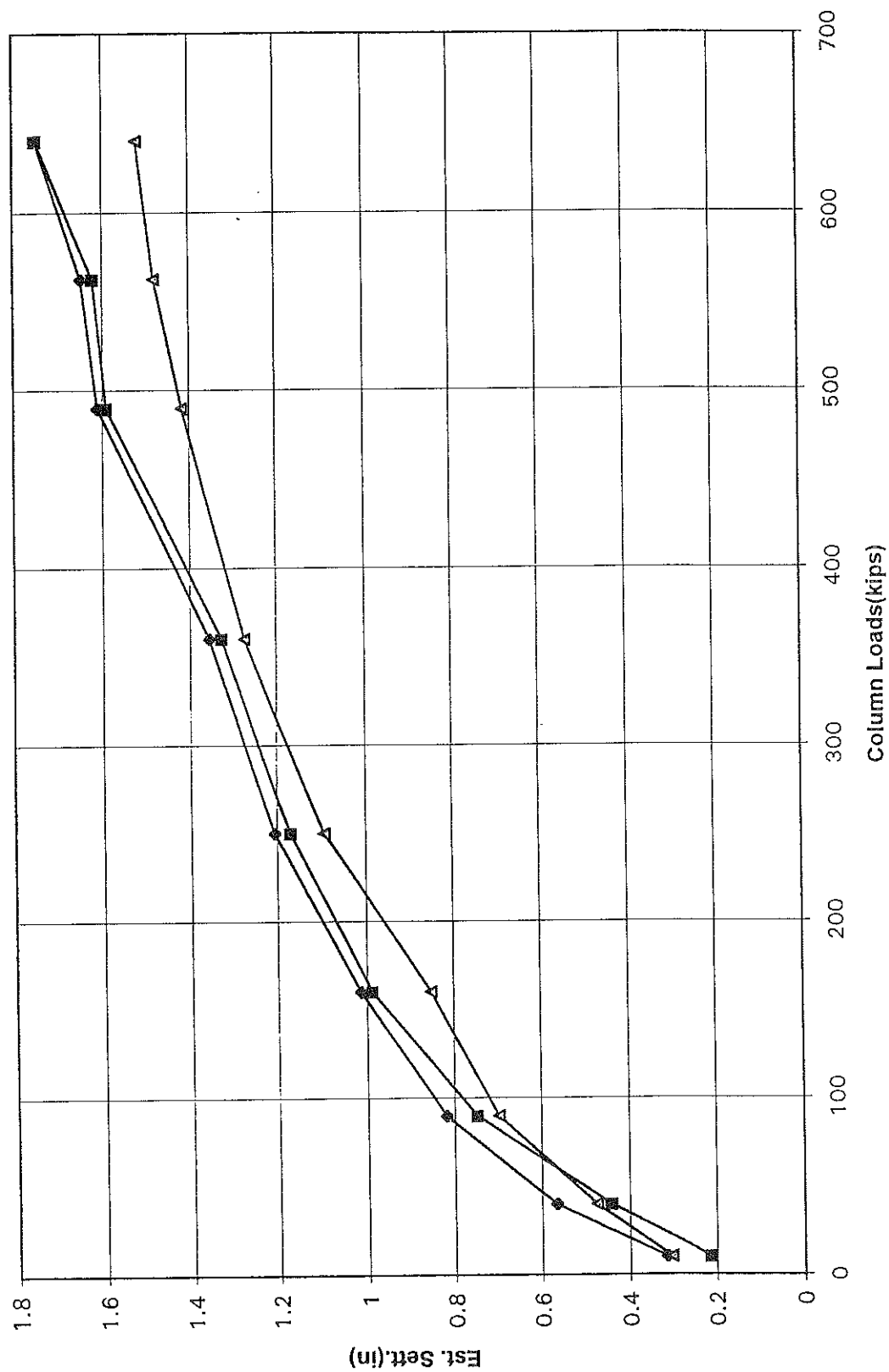


FIGURE 5

Assumes 2500 psf contact stress

TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
----------------	-------------	--------------------	----------------------------	-------------------------

0.0		20.10	10	20	40	60	100	
-----	--	-------	----	----	----	----	-----	--

0.3	Topsoil	SP						
	Loose Orange Tan Slightly Silty Fine SAND							4-5-3

3.5	Firm Tan Slightly Silty Fine to Medium SAND	SP SM	15.1					3-5-7
-----	---	----------	------	--	--	--	--	-------

			10.1					4-6-6
--	--	--	------	--	--	--	--	-------

15.5	Boring Terminated at 15.5'		5.1					8-7-12
------	----------------------------	--	-----	--	--	--	--	--------

0.1

-4.9

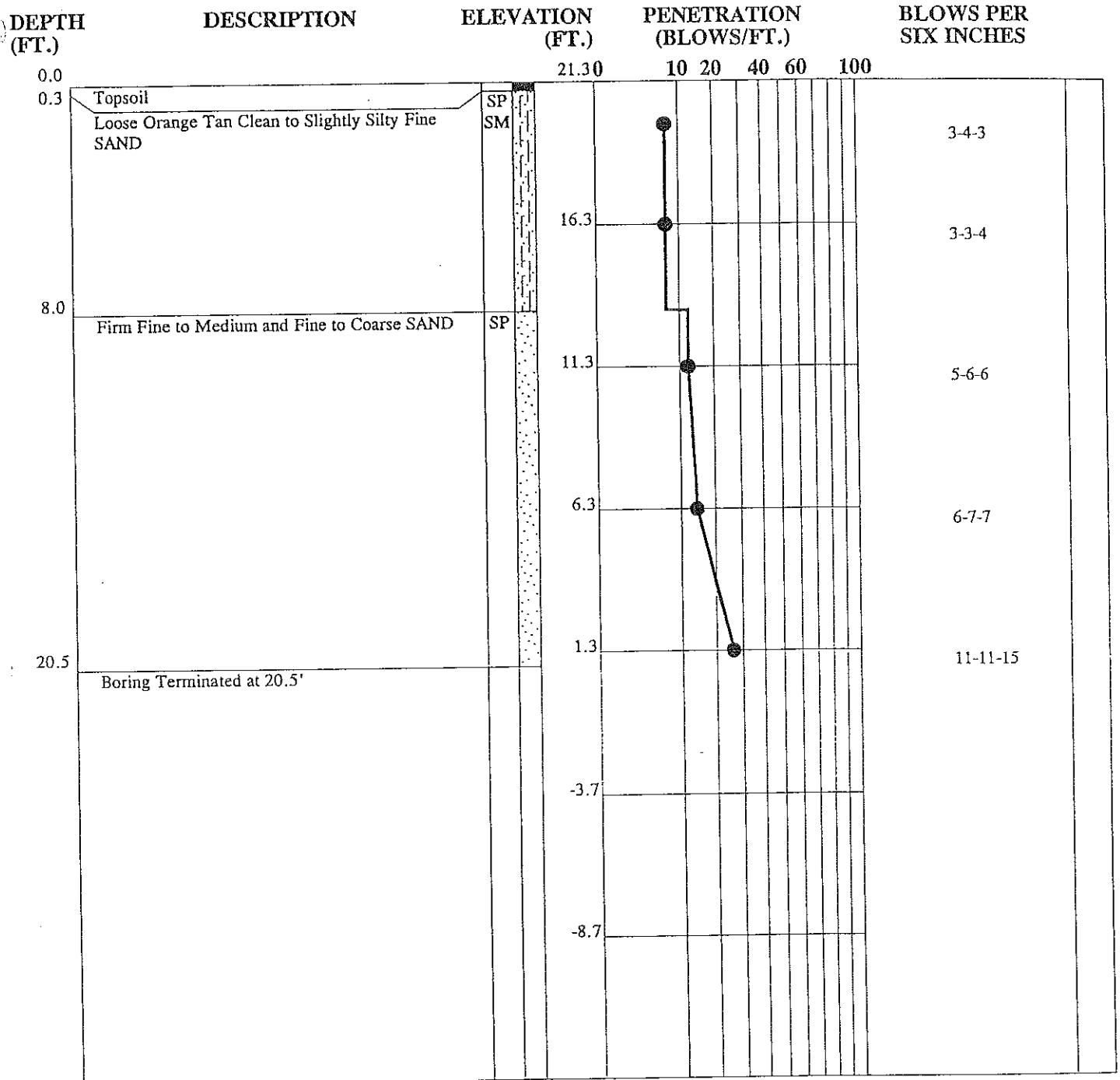
-9.9

Groundwater level measurement not obtained due to borehole caving.

JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 1
 DATE 5-22-97



TEST BORING RECORD

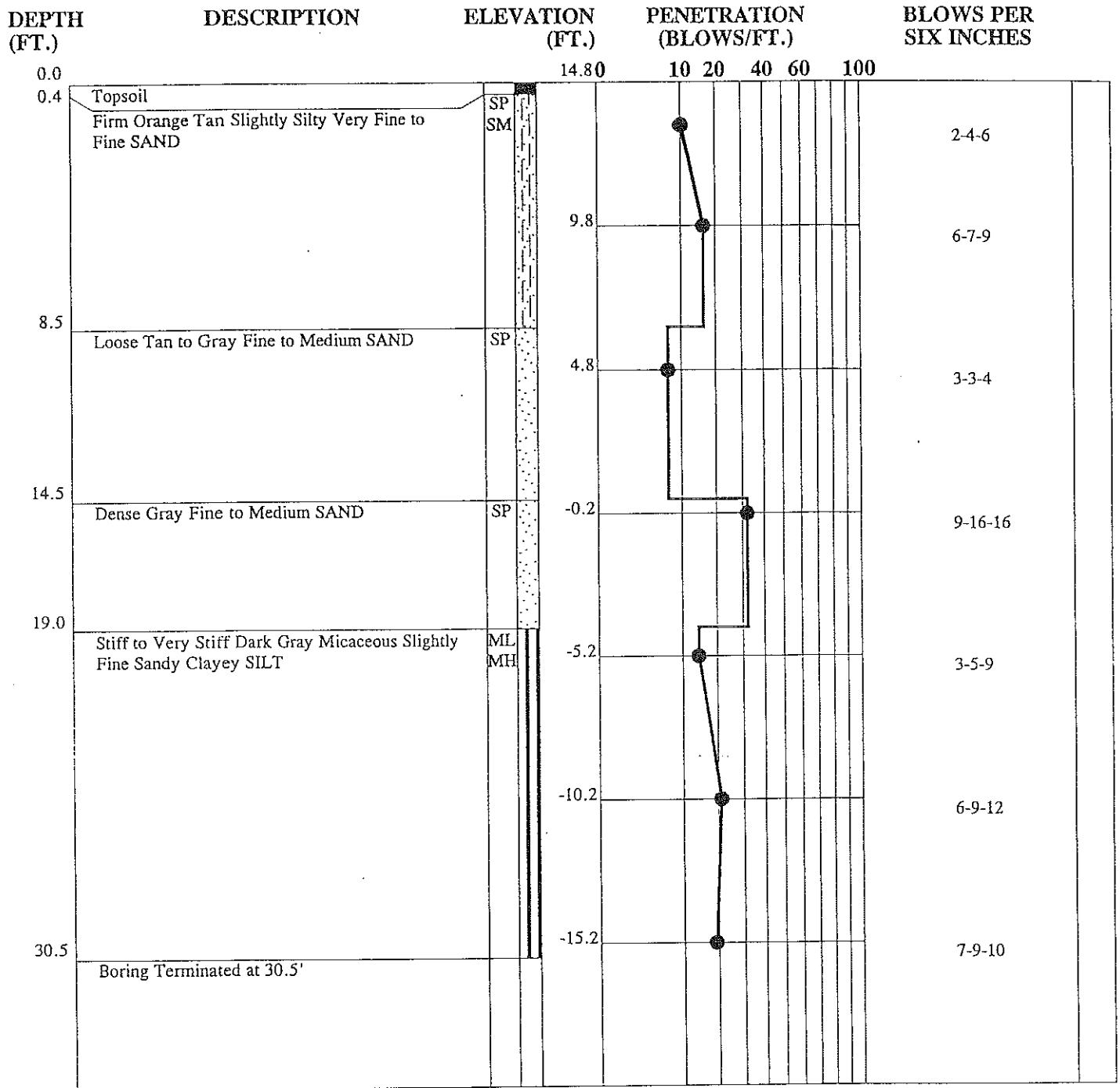


Groundwater level measurement not obtained due to borehole caving.

JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 2
 DATE 5-22-97



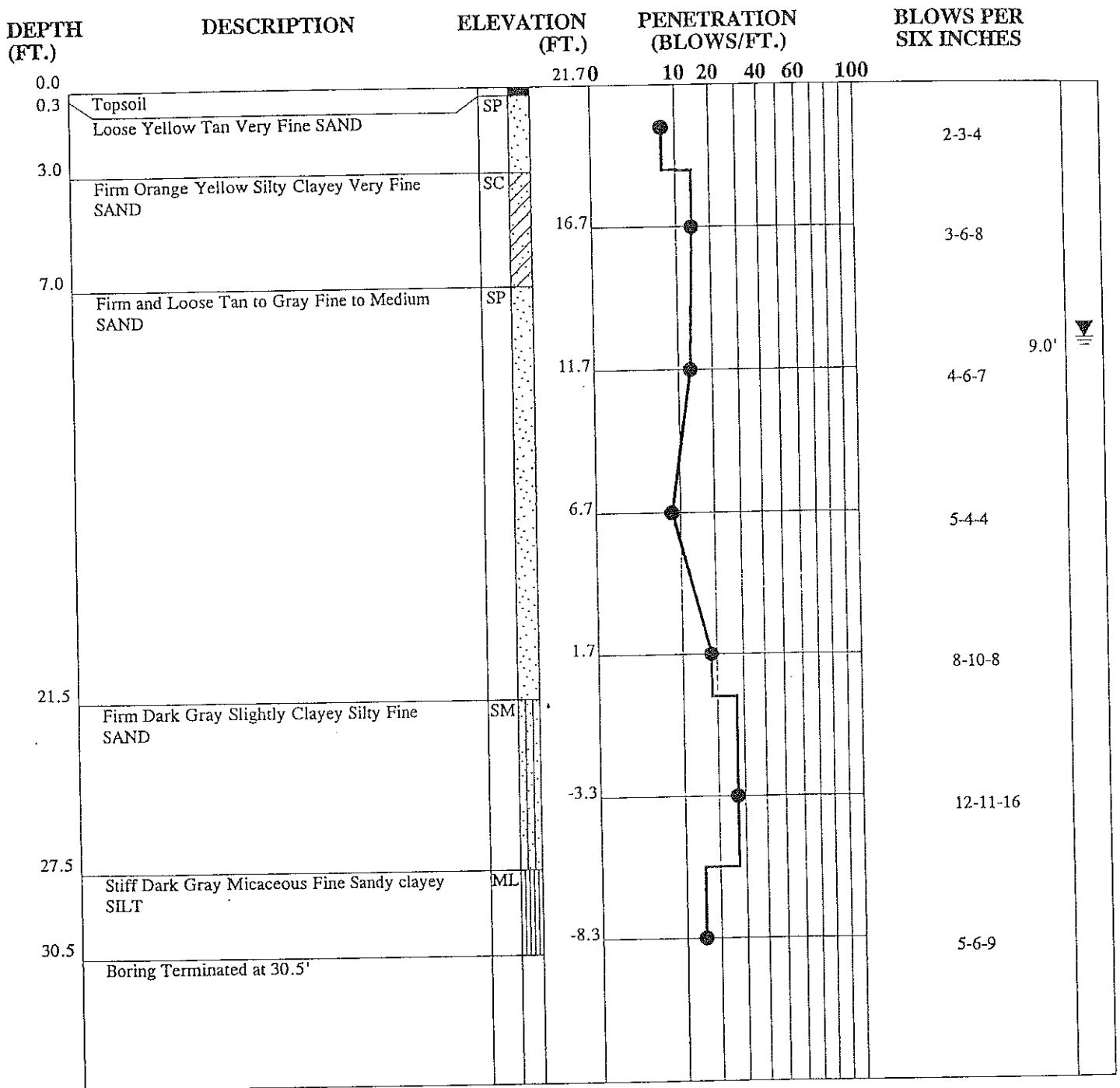
TEST BORING RECORD



JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 3
 DATE 6-3-97



TEST BORING RECORD



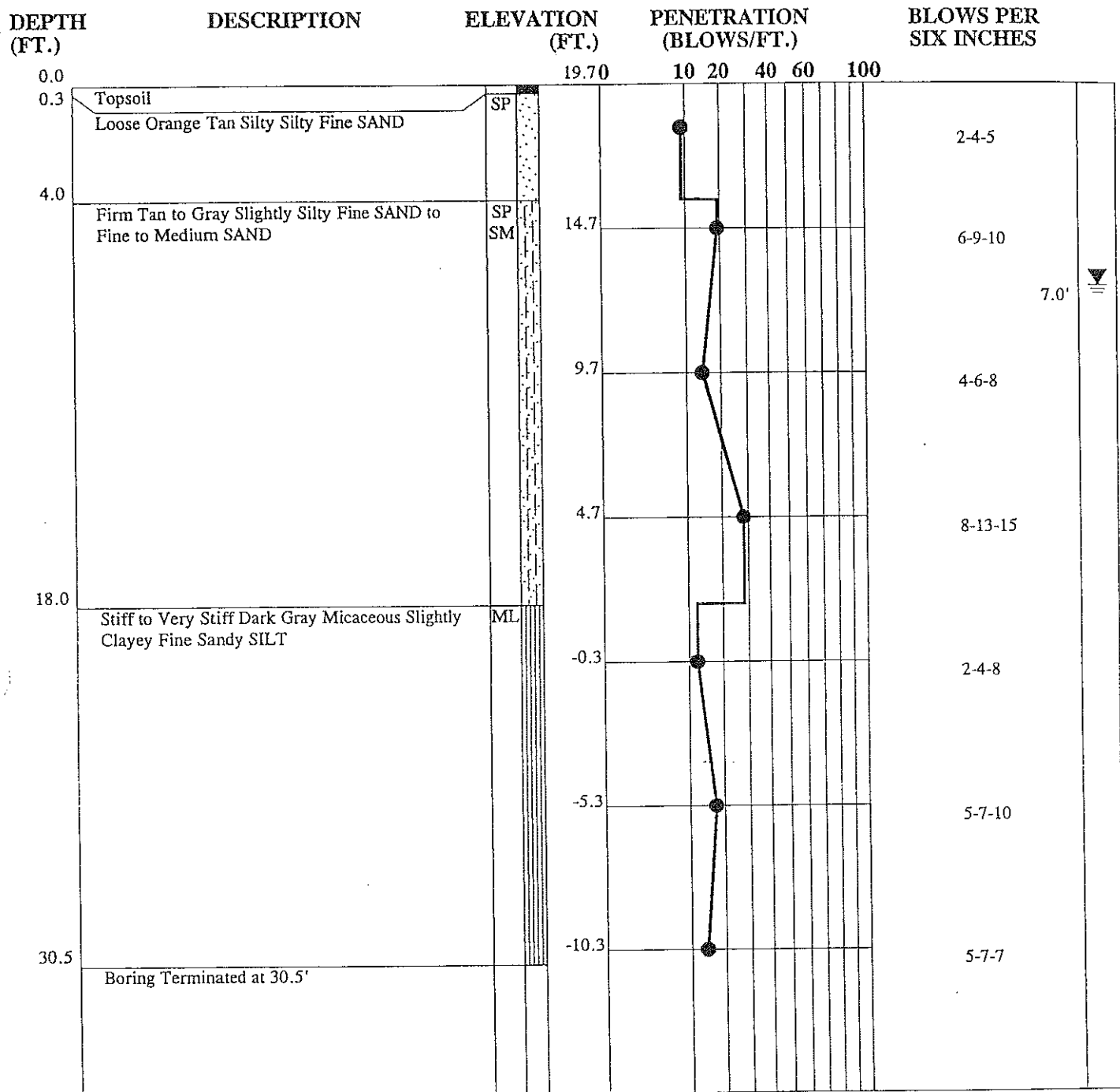
Groundwater encountered at 9.0' after 24 hours.

JOB NUMBER
BORING NUMBER
DATE

2-97-0045-EA
B- 4
6-3-97



TEST BORING RECORD

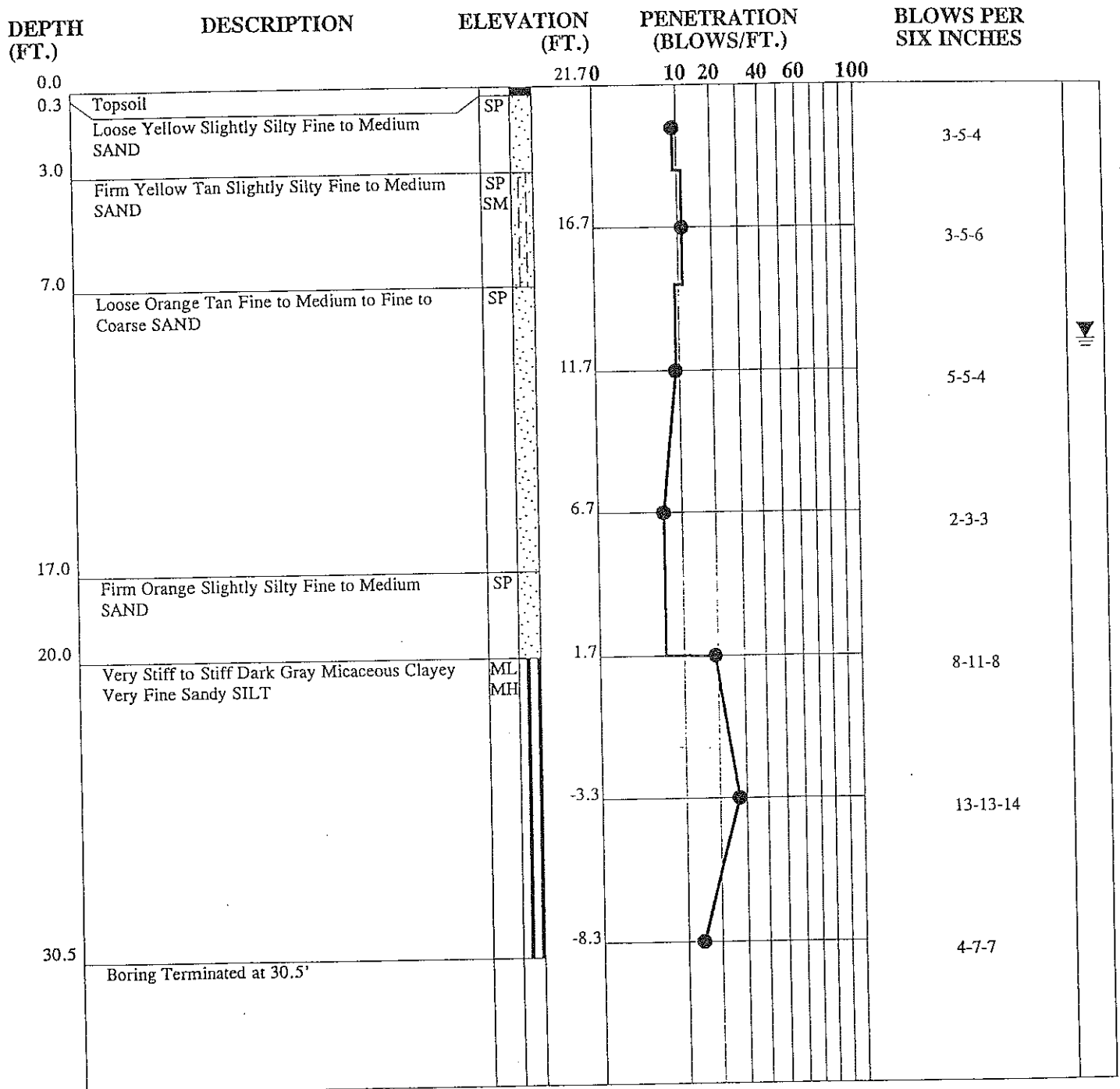


Groundwater encountered at 7.0' after 24 hours.

JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 5
 DATE 5-21-97



TEST BORING RECORD

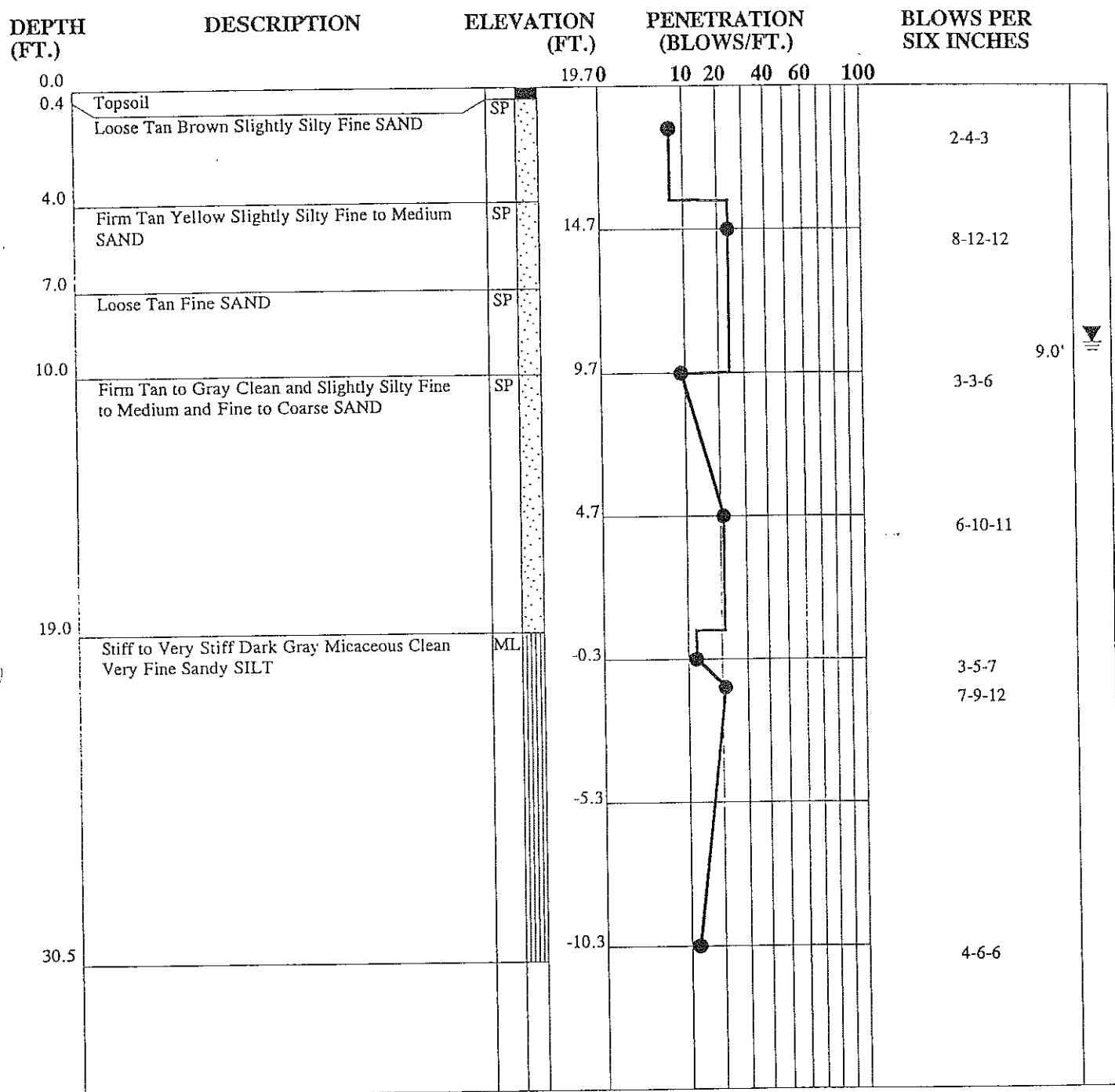


Groundwater encountered at 9.0' after 24 hours.

JOB NUMBER 2-97-0045-EA
BORING NUMBER B- 6
DATE 5-20-97



TEST BORING RECORD

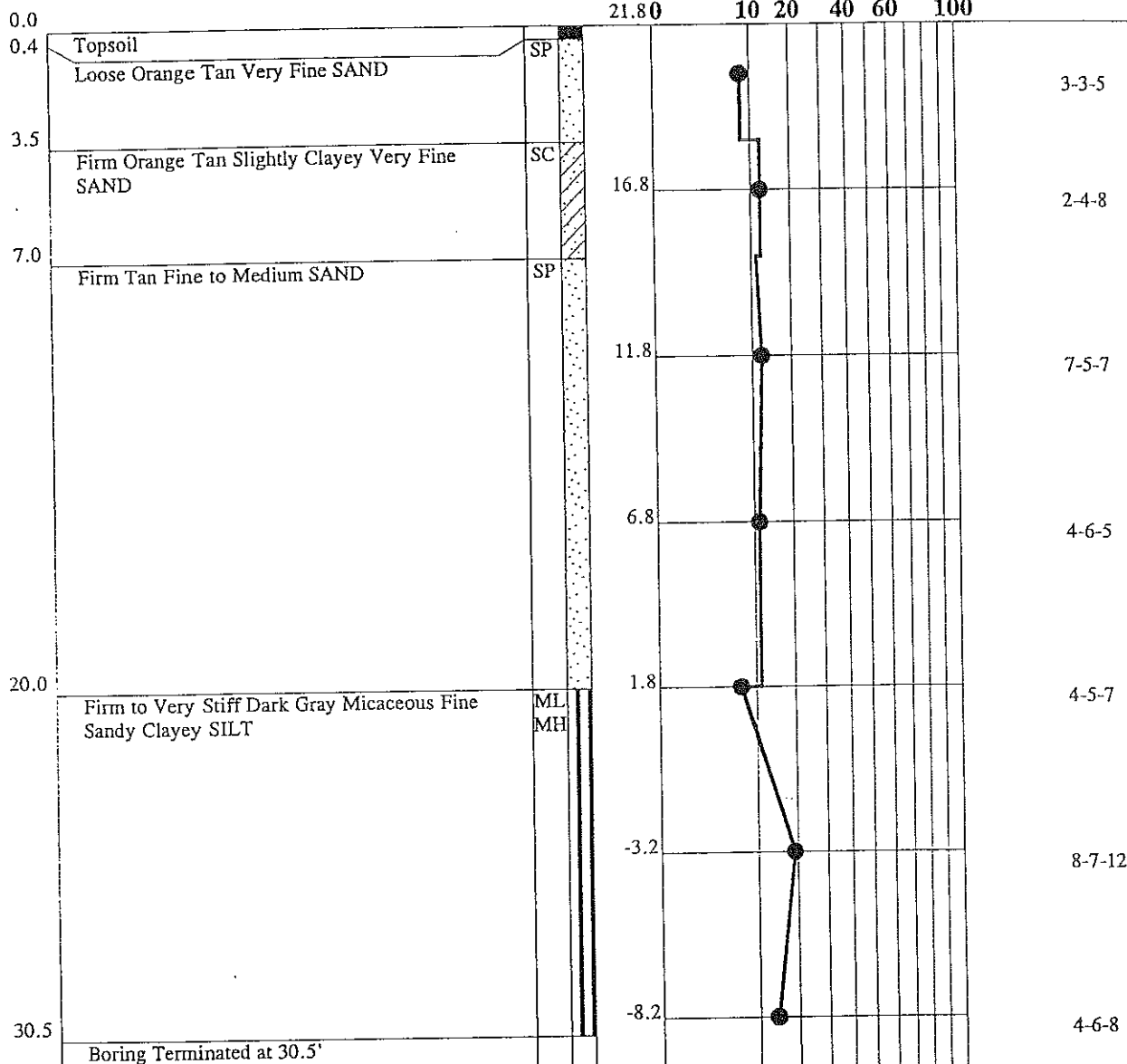


JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 7
 DATE 5-21-97



TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
----------------	-------------	--------------------	----------------------------	-------------------------

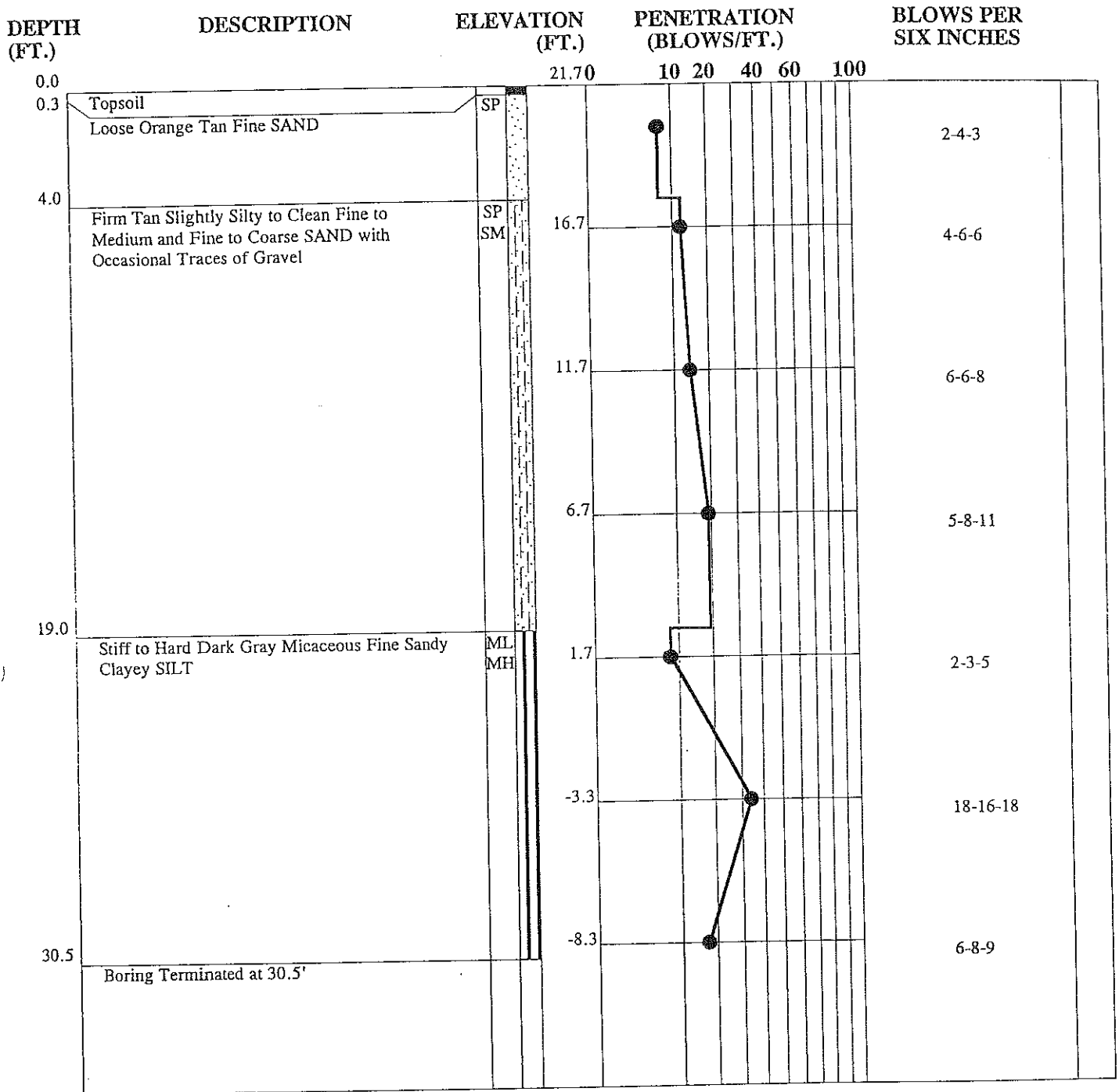


Groundwater not encountered at time of boring.

JOB NUMBER 2-97-0045-EA
BORING NUMBER B- 8
DATE 5-21-97



TEST BORING RECORD



Groundwater not encountered at time of boring.

JOB NUMBER 2-97-0045-EA
 BORING NUMBER B- 9
 DATE 5-21-97



RECEIVED OCT 14 1997

AM LLM 10/15/97
CW ✓ 10/15
CRB CLP 10/20/97
GM _____

GeoTechnologies, Inc., P.A.

3200 Wellington Court, Suite G
Raleigh, North Carolina 27615
Phone: (919) 954-1514 Fax: (919) 954-1428

10/10/97

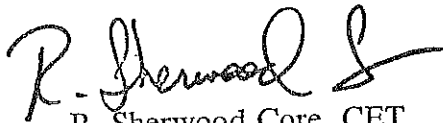
Rivers & Associates (Greenville Office)
107 E. Second Street
Greenville, NC 27835

Attention: Durk Tyson

Attached for your review are the results of construction material testing performed on the GUC Satellite LNG Facility project which is located in Greenville, North Carolina.

Very truly yours,

GeoTechnologies, Inc.



R. Sherwood Core, CET
Construction Services Manager



Edward B. Hearn, P.E.
President

Project No. 2-97-0045-CA
RSC-EBH/fgo
Enclosures

c:
Anthony Miller

FILE
COPY



3 Wellington Court, Suite G
Raleigh, North Carolina 27615
Phone (919)-954-1514

PROJECT <u>LNG facility</u> <u>Greenville</u> Wilmington	
LOCATION <u>Greenville, NC</u>	
DATE <u>1 Oct 97</u>	JOB NO <u>2-97-0045CA</u>
CONTRACTOR <u>O'Neal Construction</u>	OWNER <u>Pitt County</u>
WEATHER <u>Ptly Cloudy, windy</u>	TEMP <u>Warm</u> ° at <u>AM</u> ° at <u>PM</u>
PRESENT AT SITE	

TO _____

THE FOLLOWING WAS NOTED:

TIME: 11:00 - 1:00 (2 hrs)

MILEAGE: 45 miles (1 hr)

Arrived on site ~ 11:00 a.m. Ran 7 penetrometer tests on
open footings for Pre-fab bldg & tanks. All tests exceeded required
2000 psi. Top 1-2" of soil in footings is dry & loose. Very
strongly recommend watering & plate tamping footings just before
rebar is placed.

COPIES TO File

FIELD REPORT

SIGNED Don Jolly

JOB NO 2-97-0045CA
 PROJECT Greenville WWTP
 CLIENT Rivers & associates



HAND AUGER/DYNAMIC
 CONE PENETROMETER
 WORKSHEET
10/97

HA #	DEPTH (FT)	SOIL DESCRIPTION	PENETROMETER TEST DEPTH (FT)	PENETROMETER RESISTANCE (BLOWS 1-3/4")
1	-1'	Tan Med/Fine SAND	SG	7-8-9
	-2'	"	-1'	17-20 ⁺
	-3'	"	-2'	19-20 ⁺
	-4'	"	-3'	20 ⁺
	-5'	Drk Brn Med SAND (sub-soil)	-4'	20 ⁺
2	-1'	Tan Med/Fine SAND	SG	9-9-10
	-2'	"	-1'	20 ⁺
	-3'	"	-2'	20 ⁺
	-4'	Drk Brn Med SAND (sub-soil)	-3'	20 ⁺
3	-1'	Tan Med/Fine SAND	SG	7-9-9
	-2'	"	-1'	18-20 ⁺
	-3'	"	-2'	20 ⁺
	-4'	Drk Brn Med SAND (sub-soil)	-3'	20 ⁺
4	-1'	Tan Med/Fine SAND	SG	9-15-18
	-2'	"	-1'	19-20 ⁺
	-3'	"	-2'	20 ⁺
	-4'	(sub-soil) Orange Silty Fine SAND	-3'	13-14-14

TECHNICIAN: Don Jly

JOB NO 2-97-0045CAPROJECT Greenville WWTPCLIENT Rivers & Associates

GeoTechnologies, Inc.

HAND AUGER/DYNAMIC

CONE PENETROMETER

WORKSHEET

1 Oct 97

HA #	DEPTH (FT)	SOIL DESCRIPTION	PENETROMETER TEST DEPTH (FT)	PENETROMETER RESISTANCE (BLOWS 1-3/4")
5	-1'	Tan Med/Fine SAND	SG	9-11-14
	-2'	"	-1'	20 ⁺
	-3'	"	-2'	20 ⁺
	-4'	Orange Silty Fine SAND	-3'	13-15-16
6	-1'	Tan Med/Fine SAND	SG	10-14-16
	-2'	"	-1'	17-20 ⁺
	-3'	"	-2'	17-20 ⁺
	-4'	Orange Silty Fine SAND	-3'	14-15-15
7	-1'	Tan Med/Fine SAND	SG	7-9-11
	-2'	"	-1'	13-14-19
	-3'	"	-2'	9-13-17
	-4'	Tan Silty Fine SAND	-3'	11-14-14

TECHNICIAN:

Don Jolly

DRAWINGS

Technical specifications and drawings are electronically available from the Engineer, Northstar Industries, LLC by accessing their FTP site. Directions to access this FTP site are below.

Directions to Access Northstar's FTP Site:

The below link, login name and password is for Bidders to access the FTP site at Northstar Industries. Web Browsers, such as Internet Explorer or Google Chrome cannot be used to access the site. A FTP client software, such as FileZilla or Cute FTP Pro has to be used. Enter the below link into the FTP client software, along with the login name and password and port 22 and hit connect and you will then have access to the directory on the FTP site.

Link: <sftp://gate.northstarind.com/Outbox/GRN/>

Login Name: greenville

Password: grn42014

For problems accessing the FTP site, please contact:

Christine Stella

Northstar Industries, LLC

Information Systems Support

E-mail: cstella@northstarind.com

Phone: (978) 975-5500 ext. 132

[Balance of page left blank intentionally]

SUBMIT BID ON ATTACHED BID FORM

[Balance of page left blank intentionally]

GREENVILLE UTILITIES COMMISSION**GREENVILLE, NORTH CAROLINA****BID FORM**

1.0 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 and furnish all Work as specified or indicated in the Bidding Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2.0 Bidder accepts all of the terms and conditions of the Advertisement for Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty (60) days after the day of Bid opening.

3.0 In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that Bidder has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged:

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

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

ITEM NO.	DESCRIPTION	PRICE
I.	LNG TANKS OFFLOADING & SETTING	\$
II.	PIPING FABRICATION & INSTALLATION (Labor & Materials)	\$
III.	CONCRETE WORK (Labor & Materials)	\$
IV.	ELECTRICAL WORK (Labor & Materials)	\$
V.	PROJECT MANAGEMENT & SITE SUPERVISION	\$
	TOTAL ITEMS I-V	\$

5.0 Bidder shall provide on a separate sheet their typical billing rates and policies on a Time & Material and/or unit price basis.

METHOD OF AWARD: Items I through V will be awarded as a total Bid for all five (5) items together.

It is certified that this proposal is made in good faith and without collusion or connection with any other person bidding on the same above listed items. It is also certified that this proposal is made in good faith and without collusion or connection with any GUC employee(s).

Certified check or cash for \$_____ or bid bond for \$_____ attached.

Firm Name _____ Phone (_____) _____

Address _____

City _____ State _____ Zip Code _____

Fax (____) _____ E-Mail _____

Authorized Official _____ Title _____
Typed Name

Signature Date _____

**Three (3) copies of your proposal should be received no later than
June 25, 2014 at 2:00 PM (EDST)**

NO BIDS CONSIDERED UNLESS SUBMITTED ON THIS FORM

**(RETURN ONLY THIS FORM AND EXCEPTION FORM ALONG WITH
BID BOND FORM, IF APPLICABLE)**

GREENVILLE UTILITIES COMMISSION

GREENVILLE, NORTH CAROLINA

EXCEPTION/VARIATION FORM

Provider's Certification: This is to certify that it is our intent to furnish equipment, material, services, etc. in absolute compliance with the bid specification except where expressly noted below.

Instructions: List all exceptions or variations to these bid specifications. Providers shall identify each exception or variation by specification page. The omission of exception or variation information shall be deemed by the Commission as the Provider's intent to absolutely comply with the bid specification. If additional space is required, Provider may reproduce this form as necessary.

<u>Page #</u>	<u>Exception/Variation</u>
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Authorized Signature of Certification:

Print Name:

Firm Represented:

Address:

BID BOND

BIDDER (Name and Address):

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

OWNER (Name and Address):

GREENVILLE UTILITIES COMMISSION
401 S. GREENE STREET
GREENVILLE, NORTH CAROLINA 27834

BID

BID DUE DATE: JUNE 25, 2014

PROJECT (Brief Description Including Location):

SATELLITE LNG FACILITY PHASE IIB EXPANSION
4150 NATURAL GAS DRIVE
GREENVILLE, NORTH CAROLINA 27834

BOND

BOND NUMBER: _____

DATE (Not later than Bid due date): _____

PENAL SUM: _____

(Words)

(Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

_____(Seal)

Bidder's Name and Corporate Seal

_____(Seal)

Surety's Name and Corporate Seal

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: (1) Above addresses are to be used for giving required notice.
(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder any difference between the total amount of Bidder's Bid and the total amount of the Bid of the next lowest, responsible and responsive Bidder as determined by OWNER for the Work required by the Contract Documents, provided that:

1.1. If there is no such next lowest, responsible and responsive Bidder, and OWNER does not abandon the Project, then Bidder and Surety shall pay to OWNER the penal sum set forth on the face of this Bond, and

1.2. In no event shall Bidder's and Surety's obligation hereunder exceed the penal sum set forth on the face of this Bond.

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 by 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 and 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 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 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 or Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

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

SECTION III
CONTRACT DOCUMENTS FOR THE
CONSTRUCTION SERVICES RELATED TO THE
SATELLITE LNG FACILITY PHASE IIB EXPANSION

[Balance of page left blank intentionally]

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2014 by and between Greenville Utilities Commission (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, 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:

- Installation of two (2) 55,000 gallon horizontal LNG storage tanks including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the storage system operational.
- Installations of an approximately 55 feet wide by 55 feet long by 9.5 feet deep reinforced concrete remote spill impoundment structure with sump pump to serve the new LNG tanks including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the impoundment system usable.
- Installation of a second LNG truck unload pump skid and station including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the unload station operations.
- Installation of new flammable gas and flame detection devices in the areas of the new tanks and truck unload station.
- Replacement of the existing natural gas fired standby electric generator including all associated concrete, piping and electrical work required to make the generator operational.
- Replacement of the outlet butterfly valves on the existing water/glycol heaters with flow control/balancing valves (5 total).
- Installation of an approximately 14 feet wide by 86 feet long reinforced concrete pad in front of the existing LNG Tanks A & B.
- Extension of the existing cable tray to the front of the existing LNG Tank A and the replacement of all existing rubber instrument air hoses that feed each LNG storage tank with stainless steel tubing.

ARTICLE 2 – THE PROJECT

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

- GUC Satellite LNG Facility Phase IIB Expansion Project

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by Northstar Industries, LLC who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Once the Notice of Award has been issued, the OWNER may assume all or part of the responsibilities of the ENGINEER and RESIDENT PROJECT REPRESENTATIVE.

ARTICLE 4 - CONTRACT TIMES

4.01 Time 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 Dates for Substantial Completion and Final Payment

A. The Work will be substantially completed on or before November 21, 2014, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before December 19, 2014.

B. The portion of the Work associated with the installation of the LNG storage tank foundations shall be completed on or before August 15, 2014 in order to be ready to accept the delivery and installation of the LNG storage tanks.

4.03 Liquidated Damages

A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and the OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02.A above, plus any extensions thereof allowed in accordance with Article 12 to the General Conditions. The parties also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER One Thousand Dollars (\$1,000.00) for each day that expires after the time specified in paragraph 4.02.A for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER Five Hundred Dollars (\$500.00) for each day that expires after the time specified in paragraph 4.02.A for completion and readiness for final payment until the Work is completed and ready for final payment.

B. OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER One Thousand Dollars (\$1,000.00) for each day that expires after the time specified in paragraph 4.02.B for the installation and readiness to accept the delivery and installation of the LNG storage tanks until this portion of the Work is complete.

4.04 *Cost of Excess Engineering*

A. If the Work is not completed within the times specified in paragraph 4.02.A above, plus any extensions thereof allowed in accordance with Article 12 to the General Conditions, CONTRACTOR shall be liable for any and all additional costs incurred by the OWNER for engineering services and resident project representative fees which occur as a result of the extended contract time.

ARTICLE 5 - CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds at the prices stated in CONTRACTOR's Bid, attached hereto.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 25th day of each month during performance of the Work as provided in paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

- a. 90% of Work completed (with the balance being retainage). If the Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on recommendation of ENGINEER, may determine that as long as the character and

progress of the Work remain satisfactory to them, the retainage will be reduced on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 95% of the Work completed less the aggregate of payments previously made; and

b. 90% of cost of materials and equipment not incorporated in the Work (but delivered, suitably stored, and accompanied by documentation satisfactory to OWNER and ENGINEER as provided in Paragraph 14.2.A of the General Conditions), with the balance being retainage.

2. Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 95% of the Work completed, less such amounts as ENGINEER shall determine in accordance with paragraph 14.02.B.5 of the General Conditions.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

ARTICLE 7 - INTEREST

7.01 Pursuant to paragraph 143-134.1, General Statutes of North Carolina, the balance due CONTRACTOR shall be paid in full within 45 days after the Work has been accepted by ENGINEER and OWNER, or occupied by OWNER and used for the purpose for which the Project was constructed, whichever occurs first. Provided, however, that whenever ENGINEER determines that delay in completion of the Project in accordance with terms of the General Conditions is the fault of CONTRACTOR, the Project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the 45 day limit. No payment shall be delayed because of the failure of another contractor on such Project to complete his work. Should final payment to CONTRACTOR beyond the date such Work has been declared to be completed by ENGINEER, accepted by OWNER, or occupied by OWNER and used for the purposes for which the Project was constructed, be delayed by more than 45 days, said CONTRACTOR shall be paid interest, beginning on the 46th day, at the rate of twelve percent (12%) per annum on such unpaid balance as may be due. Where a conditional acceptance of the Work exists, and where OWNER is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 9.01.G.) and the other related data identified in the Bidding Documents including "technical data."

B. CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

D. CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02.A of the General Conditions. CONTRACTOR accepts determination set forth in paragraph SC-1.01.A.47 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 4.02 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

E. 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.

F. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

G. 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, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- A. This Agreement
- B. Performance, Payment, and other Bonds
- C. Standard General Conditions of the Construction Contract
- D. Supplementary Conditions
- E. Scope of Work bearing the title: Greenville Utilities Commission Satellite LNG Facility Phase IIB Expansion and consisting of divisions as listed in table of contents thereof.
- F. Drawings consisting of a cover sheet and sheets listed, inclusive with each sheet bearing the following general title: Greenville Utilities Commission Satellite LNG Facility Phase IIB Expansion, Issued for Bid.
- G. Addenda numbers ____ to ____, inclusive.
- H. CONTRACTOR's Bid (inclusive of Bid Form)
- I. Documentation submitted by CONTRACTOR prior to Notice of Award:
 - 1. Drug Screening Statement
 - 2. Certificate of Insurance
- J. Notice of Award
- K. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto:
 - 1. Notice to Proceed;

2. All Work Change Directives and Change Orders amending, modifying or supplementing the Contract Documents pursuant to paragraph 3.04 of the General Conditions;

3. Drawings consisting of a cover sheet and sheets listed, inclusive with each sheet bearing the following general title: Greenville Utilities Commission Satellite LNG Facility Phase IIB Expansion, Issued for Construction.

9.02 The documents listed in paragraphs 9.01 above are attached to this Agreement (except as expressly noted otherwise above).

9.03 There are no Contract Documents other than those listed above in this Article 9.

9.04 The Contract Documents may only be amended, modified or supplemented as provided in paragraph 3.04 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01. The Standard General Conditions of the Construction Contract are referred to herein as the General Conditions.

10.02. Terms used in this Agreement will have the meanings indicated in the General Conditions.

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

10.04. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

10.05 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.

GUC Satellite LNG Facility Phase IIB Expansion

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR or identified by ENGINEER on their behalf.

This Agreement will be effective on _____, 2014 (which is the Effective Date of the Agreement).

GREENVILLE UTILITIES COMMISSION:

By: _____
Anthony C. Cannon

Title: General Manager/CEO
(Authorized Signatory)

Date: _____

Attest: _____

Name (Print): Amy Carson Quinn

Title: Executive Secretary

Date: _____

(OFFICIAL SEAL)

CONTRACTOR:

By: _____

Name (Print): _____

Title: _____
(Authorized Signatory)

Date: _____

Attest: _____

Name (Print): _____

Title: Corporate Secretary

Date: _____

(CORP. SEAL)

GUC Satellite LNG Facility Phase IIB Expansion

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

By: _____
Jeff W. McCauley

Title: Chief Financial Officer

Date: _____

APPROVED AS TO FORM AND LEGAL CONTENT:

By: _____
Phillip R. Dixon

Title: Commission Attorney

Date: _____

STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT

SATELLITE LNG FACILITY PHASE IIB EXPANSION
GREENVILLE UTILITIES COMMISSION

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *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.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *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 any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change

ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

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

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given

at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work

to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such

provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer's consultants, including electronic media editions; or

2. reuse any of 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 adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the

party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

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

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

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

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and

that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in

Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous

Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or

its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be

correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

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

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by

Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees,

agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

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

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

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial

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

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

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

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *“Or-Equal” Items:* If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor’s achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer’s sole discretion, to determine that

the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

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

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection

in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions

whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

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

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

6.12 *Record Documents*

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

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , 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).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among

employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

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

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

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

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs

incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

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

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

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

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

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

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

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

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any

Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph

13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice 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) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and

the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

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

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented

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

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general

administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit,

and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier

Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

13.01 *Notice of Defects*

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

13.02 *Access to Work*

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

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all

inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses,

and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be

prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer)

prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses

and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

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

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a

specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

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

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after

submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

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

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

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

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of

the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
- b. consent of the surety, if any, to final payment;
- c. a list of all Claims against Owner that Contractor believes are unsettled; and
- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and

equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

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

14.08 *Final Completion Delayed*

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

and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

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

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

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

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated

specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *Headings*

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

SUPPLEMENTARY CONDITIONS

General

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

SC-1.01 Defined Terms

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (EJCDC C-700) have the meanings assigned to them in the General Conditions.

SC-1.01.A.47. Supplementary Conditions

Add the following to the end of GC-1.01.A.47:

The words "Special Provisions," "Special Conditions," and "Supplementary Conditions," wherever they may appear in these Contract Documents and Specifications, are used interchangeably and shall be interpreted to mean either "Special Conditions" or "Supplementary Conditions" which ever may be applicable.

SC-1.01.A.53. Abnormal Weather

Add the following after GC-1.01.A.52:

Abnormal Weather Conditions - As mentioned in the General Conditions Article 12.03, Abnormal Weather Conditions shall be defined as weather more severe than the average of the last ten (10) years as recorded at the Greenville Utilities Commission's Water Treatment Plant.

SC-2.02 Copies of Documents

Revise GC-2.02.A to read as follows:

The OWNER will furnish one (1) electronic copy of the plans and specifications to the Contractor. Additional sets, if required may be obtained at the cost of reproduction and shipping.

SC-2.03 Commencement of Contract Times; Notice to Proceed

Revise GC-2.03.A as follows:

Delete the last sentence and insert the following: "In no event will the Contract Time commence to run later than the ninetieth day after the day of the Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier. By mutual consent of the parties to the contract, these limits may be changed."

SC-4.0.4 Underground Facilities

Replace paragraph GC-4.04.A.1. with the following:

1. Existing underground installations are indicated on the drawings only to the extent such information was made available to or discovered by ENGINEER in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed.

Generally, existing service connections are not indicated on the drawings. CONTRACTOR shall be responsible for discovery of existing underground installations, in advance of excavating or trenching, by contacting all local utilities and by prospecting.

The CONTRACTOR shall notify North Carolina One-Call Center, Inc., (NC ONE-CALL), Greensboro, North Carolina at least 48 hours prior to commencing construction in order that existing utilities in the area may be flagged or staked. The toll free number is 1-800-632-4949. This service will in no way relieve the CONTRACTOR of his responsibility to protect and maintain all existing utilities in an operational manner.

SC-5.04 Contractor's Liability Insurance

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

Worker's Compensation:

- (1) State: Statutory
- (2) Applicable Federal (e.g., Longshoreman's) Statutory
- (3) Employer's Liability: \$500,000.00

Contractor's Liability Insurance which shall also include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- | | | |
|-----|--|----------------|
| (1) | General Aggregate (Except Products - Completed Operations): | \$2,000,000.00 |
| (2) | Products - Completed Operations Aggregate: | \$2,000,000.00 |
| (3) | Personal and Advertising Injury (Per Person/Organization): | \$2,000,000.00 |
| (4) | Each Occurrence (Bodily Injury and Property Damage): | \$2,000,000.00 |
| (5) | Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable. | |
| (6) | <u>Excess Liability</u> | |
| | General Aggregate: | \$4,000,000.00 |
| | Each Occurrence: | \$4,000,000.00 |

Automobile Liability:

- | | |
|-----|---|
| (1) | <u>Bodily Injury:</u> |
| | \$1,000,000.00 Each Person |
| | \$1,000,000.00 Each Accident |
| | <u>Property Damage:</u> |
| | \$1,000,000.00 Each Accident |
| | or |
| (2) | <u>Combined Single Limit (Bodily Injury and Property Damage):</u> |
| | \$1,000,000.00 Each Accident |

SC-5.04.B.5. Contractual Endorsement

The Contractual Liability coverage required by paragraph 5.04.A of the General Conditions shall provide coverage for not less than the following amounts:

- | | | |
|-----|--|----------------|
| (1) | General Aggregate: | \$2,000,000.00 |
| (2) | Each Occurrence (Bodily Injury and Property Damage): | \$2,000,000.00 |

SC-6.02 Labor; Working Hours

Add the following to GC-6.02:

C. Regular working hours shall be from 7:00 AM to 5:30 PM, Monday through Friday except for legal holidays. Work on a Saturday, Sunday, or any legal holiday may be permitted granted CONTRACTOR gives written notice to ENGINEER and OWNER at least one week prior to the scheduled work. The OWNER will require a representative to be on-site during all work activities.

SC-6.10 Taxes

Add the following to GC-6.10:

B. CONTRACTOR shall submit to the OWNER a sworn affidavit itemizing the quantity and value of the materials and rentals he has used on the Project and the amount of Sales and Use Tax he has paid on such materials or rentals. Affidavit shall be submitted within 30 days of each July 1 during the time that Work under this Contract is in progress and at the time the CONTRACTOR submits his request for final payment.

Affidavit shall cover only the Sales and Use Tax paid during the period from the date of award to the first July 1 date after award, or for the 12 months preceding the July 1 date for which the affidavit is submitted, as applicable, except the affidavit submitted with request for final payment shall cover the period from effective date of last submitted affidavit to the date of request for final payment. Sales and Use Tax paid on materials and rentals purchased as the personal property of the CONTRACTOR shall not be included in any affidavit submitted to OWNER.

SC-6.20 Indemnification

Replace paragraph GC-6.20.A with the following:

CONTRACTOR agrees to indemnify and save GREENVILLE UTILITIES COMMISSION of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, its co-owners, joint venturers, agents, employees, and insurance carriers harmless from any and all losses, claims, actions, costs, expenses including reasonable attorney fees, judgments, subrogations, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person arising out of or

incident to the performance of the terms of this Contract by CONTRACTOR, including, but not limited to, CONTRACTOR's employees, agents, subcontractors, and others designated by CONTRACTOR to perform work or services in, about, or attendant to, the work and services under the terms of this Contract. CONTRACTOR shall not be held responsible for any losses, expenses, claims, subrogations, actions, costs, judgments, or other damages, directly, solely, and proximately caused by the negligence of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina. Insurance covering this indemnity agreement by the CONTRACTOR in favor of Greenville Utilities Commission of the City of Greenville, Pitt County, North

SC-11.0.3 Unit Price Work

Paragraph 11.0.3 of the General Conditions is hereby deleted in its entirety and the following is substituted in its place:

A. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. if the total cost of a particular item of Unit Price Work amounts to 10% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and
2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price, either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with paragraph 10.5 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

SC-14.02.A. Application for Payments

Add the following at the end of GC-14.02.A:

4. The CONTRACTOR shall make the following certification on each request for payment:

The undersigned CONTRACTOR certifies that (1) ALL previous progress payments received from OWNER on account of Work done under the Contracts referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with work covered by prior Applications for Payment numbered 1 through inclusive; (2) Title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all liens, claims, security interests, and encumbrances (except such as

covered by Bond acceptable to OWNER); and (3) Work covered by this Application for Payment has been completed in accordance with the Contract Documents.

SC-14.04 Substantial Completion

Add the following at the end of GC-14.04:

F. To be considered Substantially Complete, the following portions of the Work must be operational and ready for OWNER's continuous use as intended:

- LNG Storage Tanks
- LNG Truck Unload Station
- Electrical & Instrumentation Systems
- Fire & Gas Detection System
- Water/Glycol Heating System
- QA/QC Documentation

Portions of the Work not essential to operation, which can be completed without interruption of operation, may be completed after the Work is accepted as Substantially Complete, and may include the following items:

- Sodding, Seeding and Mulching
- Final Cleanup & Demobilization
- Final Project Documentation

SC-14.05 Partial Utilization

Add the following to GC-14.05.A:

5. Such taking possession or use will not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. OWNER's use of any facilities so identified in the Contract Documents will not be grounds for extension of the Contract Time or change in the Contract Price. OWNER's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by CONTRACTOR will be equitably adjusted with a Change Order.

SC-14.06 Final Inspection

Add a new paragraph immediately GC-14.10.6.A which is to read as follows:

B. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not Substantially Complete. A copy of such request will be sent to ENGINEER and within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine

its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such lists to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

SC-16.01 Dispute Resolution: Methods and Procedures

Replace paragraph GC-16.01 with the following:

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

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

END OF SUPPLEMENTARY CONDITIONS

NOTICE OF AWARD

TO: _____

PROJECT DESCRIPTION:

The Work is generally described as follows:

- Installation of two (2) 55,000 gallon horizontal LNG storage tanks including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the storage system operational.
- Installations of an approximately 55 feet wide by 55 feet long by 9.5 feet deep reinforced concrete remote spill impoundment structure with sump pump to serve the new LNG tanks including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the impoundment system usable.
- Installation of a second LNG truck unload pump skid and station including all associated civil, concrete, piping, mechanical, electrical and instrumentation work required to make the unload station operations.
- Installation of new flammable gas and flame detection devices in the areas of the new tanks and truck unload station.
- Replacement of the existing natural gas fired standby electric generator including all associated concrete, piping and electrical work required to make the generator operational.
- Replacement of the outlet butterfly valves on the existing water/glycol heaters with flow control/balancing valves (5 total).
- Installation of an approximately 14 feet wide by 86 feet long reinforced concrete pad in front of the existing LNG Tanks A & B.
- Extension of the existing cable tray to the front of the existing LNG Tank A and the replacement of all existing rubber instrument air hoses that feed each LNG storage tank with stainless steel tubing.

The OWNER has considered the BID submitted by you for the above described WORK in response to its ADVERTISEMENT FOR BIDS and INSTRUCTIONS TO BIDDERS.

You are hereby notified that your BID has been accepted for (item) in the amount of \$_____.

GUC - Satellite LNG Facility Phase IIB Expansion

You are required by the INSTRUCTIONS TO BIDDERS to execute the AGREEMENT and furnish the required CONTRACTOR'S PERFORMANCE BOND, PAYMENT BOND, CERTIFICATES OF INSURANCE and DEPARTMENT OF TRANSPORTATION (DOT) ANTI-DRUG PROGRAM within ten (10) calendar days from the date of this NOTICE OF AWARD.

If you fail to execute said AGREEMENT and to furnish said BONDS within ten (10) days from the date of this NOTICE, said OWNER will be entitled to consider all your right's arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 2014.

GREENVILLE UTILITIES COMMISSION
(Owner)

By

Signature _____

Title

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By _____

this the _____ day of _____, 2014.

By _____

Signature

Title _____

GUC – Satellite LNG Facility Phase IIB Expansion

NOTICE TO PROCEED

TO: _____

DATE: _____

PROJECT: Satellite LNG Facility Phase IIB

Expansion Project

You are hereby notified to commence the WORK in accordance with the AGREEMENT dated _____, 2014, on or before _____, 2014, and you are to complete the WORK within _____ consecutive calendar days thereafter.

The date of completion of all WORK is therefore December 19, 2014.

GREENVILLE UTILITIES COMMISSION
(Owner)

By _____

Signature _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____ this the _____ day of _____, 2014.

By _____

Signature _____

Title _____

PERFORMANCE BOND

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

GUC – Satellite LNG Facility Phase IIB Expansion

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

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

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

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. 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:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

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

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

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

4.4.1 After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2 Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen 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 4.4, and the OWNER refuses the payment tendered 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.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. 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 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the 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, or successors.

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

9. 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 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 period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

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

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of 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 Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

**GREENVILLE UTILITIES COMMISSION / GAS DEPARTMENT
CONTRACTOR DRUG SCREENING STATEMENT**

NOTE: THE CONTRACTOR SHALL COMPLETE AND FURNISH THIS FORM FOR THE CONTRACT UNDER WHICH WORK WILL BE PERFORMED ON GREENVILLE UTILITIES COMMISSION'S FACILITIES. THE CONTRACTOR SHALL USE AS MANY PAGES AS NECESSARY (NUMBER AND INITIAL EACH SHEET) TO IDENTIFY ALL CONTRACTOR PERSONNEL THAT ARE SUBJECT TO THE CONTRACTOR DRUG SCREENING PROGRAM AS REQUIRED UNDER THE CONTRACT WITH GREENVILLE UTILITIES COMMISSION. THE CONTRACTOR SHALL FILE A SUPPLEMENTAL STATEMENT FOR PERSONNEL CHANGES. CONTRACTOR'S RECORDS ARE SUBJECT TO AUDIT BY GREENVILLE UTILITIES COMMISSION TO VERIFY THIS STATEMENT.

CONTRACTOR'S NAME: _____

PROJECT DESCRIPTION: _____

CONTRACT DATE: _____

I, _____, _____, CERTIFY THAT ALL
(NAME) (TITLE)

PERSONS SUBJECT TO DRUG SCREENING REQUIREMENTS UNDER THIS CONTRACT HAVE BEEN TESTED AND FOUND ACCEPTABLE FOR WORK ON GREENVILLE UTILITIES COMMISSION'S FACILITIES. THIS INITIAL/ SUPPLEMENTAL STATEMENT IDENTIFIES ALL PERSONS AS FOLLOWS:

NAME	JOB TITLE	DATE OF DRUG TEST
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

INITIAL STATEMENT _____

SUPPLEMENT STATEMENT _____

PAGE _____ OF _____

SIGNATURE _____

DATE _____

I, _____, a Notary Public of the County of _____ State of North Carolina, hereby certify that _____ appeared personally before me this day and being duly sworn acknowledged that the above form was executed by him.

Witness my hand and notarial seal, this _____ day of _____, 20 _____.

Notary

My commission expires _____

CHANGE ORDER

No. _____

DATE OF ISSUANCE _____

EFFECTIVE DATE _____

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER's Contract No. _____ ENGINEER's Contract No. _____

ENGINEER _____

You are directed to make the following changes in the Contract Documents:

Description:

Reason for Change Order:

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:
Original Contract Price \$ _____
Net Increase (Decrease) from previous Change Orders No. ____ to ____: \$ _____
Contract Price prior to this Change Order: \$ _____
Net increase (decrease) of this Change Order: \$ _____
Contract Price with all approved Change Orders: \$ _____

CHANGE IN CONTRACT TIMES:
Original Contract Times: Substantial Completion: _____ Ready for final payment: _____ (days or dates)
Net change from previous Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for final payment: _____ (days)
Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____ (days or dates)
Net increase (decrease) this Change Order: Substantial Completion: _____ Ready for final payment: _____ (days)
Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____ (days or dates)

RECOMMENDED:

APPROVED:

ACCEPTED:

By: _____ By: _____ By: _____
ENGINEER (Authorized Signature) OWNER (Authorized Signature) CONTRACTOR (Authorized Signature)

Date: _____ Date: _____ Date: _____

CHANGE ORDER

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

GUC – Satellite LNG Facility Phase IIB Expansion

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

By: _____
Jeff W. McCauley

Title: Chief Financial Officer_____

Date: _____

APPROVED AS TO FORM AND LEGAL CONTENT:

By: _____
Phillip R. Dixon

Title: Commission Attorney_____

Date: _____

WORK CHANGE DIRECTIVE

No. _____

DATE OF ISSUANCE _____

EFFECTIVE DATE _____

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER's Contract No. _____ ENGINEER's Project No. _____

You are directed to proceed promptly with the following change(s):

Description:

Purpose of Work Change Directive:

Attachments: (List documents supporting change)

If OWNER or CONTRACTOR believe that the above change has affected Contract Price any Claim for a Change Order based thereon will involve one or more of the following methods as defined in the Contract Documents.

Method of determining change in
Contract Price:

- ☐ Unit Prices
☐ Lump Sum
☐ Cost of the Work _____

Estimated increase (decrease) in Contract Price:
\$ _____.

If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase (decrease) in Contract
Times:

Substantial Completion: _____ days;
Ready for final payment: _____ days.

RECOMMENDED:

AUTHORIZED:

ENGINEER
By: _____

OWNER
By: _____

WORK CHANGE DIRECTIVE

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a change in the Contract Price or the Contract Times a Field Order should be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated time is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize changes in Price or Times. Once authorized by Owner, a copy should be sent by Engineer to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor with Engineer's recommendation.

Paragraph 10.03.A.2 of the General Conditions requires that a Change Order be initiated and processed to cover any undisputed sum or amount of time for Work actually performed pursuant to this Work Change Directive.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR CONTRACT TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

APPLICATION FOR PAYMENT NO. _____

To: _____ (OWNER)

From: _____ (CONTRACTOR)

Contract: _____

Project: _____

OWNER's Contract No. _____ ENGINEER's Project No. _____

For Work accomplished through the date of: _____.

- | | | |
|----|--|-----------------|
| 1. | Original Contract Price: | \$ _____ |
| 2. | Net change by Change Orders and Written Amendments (+ or -): | \$ _____ |
| 3. | Current Contract Price (1 plus 2): | \$ _____ |
| 4. | Total completed and stored to date: | \$ _____ |
| 5. | Retainage (per Agreement): | |
| | _____ % of completed Work: | \$ _____ |
| | _____ % of stored material: | \$ _____ |
| | Total Retainage: | \$ _____ |
| 6. | Total completed and stored to date less retainage (4 minus 5): | \$ _____ |
| 7. | Less previous Application for Payments: | \$ _____ |
| 8. | DUE THIS APPLICATION (6 MINUS 7): | \$ _____ |

Accompanying Documentation:

CONTRACTOR'S Certification:

The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied on account to discharge CONTRACTOR's legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through _____ inclusive; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective.

Dated _____
CONTRACTOR

By: _____

State of _____

County of _____

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

Notary Public

My Commission expires: _____

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dated _____
ENGINEER

By: _____

GUC - Satellite LNG Facility Phase IIB Expansion

Application No. _____ Date: _____

ITEM	UNIT PRICE	ESTIMATED QUANTITY	SCHEDULE OF VALUES AMOUNT	QUANTITY COMPLETED	AMOUNT	%	MATERIAL STORED	AMOUNT COMPLETED AND STORED
1.	\$		\$		\$		\$	\$
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								
21.								
22.								
23.								
24.								
25.								
TOTAL			\$		\$		\$	\$

Note: Total Schedule of Values Amount should equal the current Contract Price.

CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE OF ISSUANCE _____

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER's Contract No. _____ ENGINEER's Project No. _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To _____
OWNER

And To _____
CONTRACTOR

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within _____ days of the above date of Substantial Completion.

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The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees shall be as follows:

OWNER: _____

CONTRACTOR: _____

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

[For items to be attached see definition of Substantial Completion as supplemented and other specifically noted conditions precedent to achieving Substantial Completion as required by Contract Documents.]

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

Executed by ENGINEER on _____
Date

ENGINEER

By: _____
(Authorized Signature)

CONTRACTOR accepts this Certificate of Substantial Completion on _____
Date

CONTRACTOR

By: _____
(Authorized Signature)

OWNER accepts this Certificate of Substantial Completion on _____
Date

OWNER

By: _____
(Authorized Signature)

SECTION IV
ADDITIONAL INFORMATION FOR THE
CONSTRUCTION SERVICES RELATED TO THE
SATELLITE LNG FACILITY PHASE IIB EXPANSION

[Balance of page left blank intentionally]

Pre-bid Meeting 6/4/14 Minutes
Greenville Utilities Commission – Bid No. 14-17
LNG Plant Phase IIB Expansion

Attendees:

Greenville Utilities Commission: Carl Smith, Troy Heath, John Daughton
Northstar Industries, LLC: Tom High, Mike Genimatas, Tom Bunosso
C.A. Lewis, Inc.: David Laney
Edwards, Inc.: Larry Howle, Richard Day

Minutes:

The scope of work and drawing package was reviewed briefly with the group. The meeting was followed by a walk-through tour at the LNG plant. All attendees were present at both the meeting and plant walk-through.

Contact John Daughton for additional visits to the LNG Plant at (252)551-1485.

Questions and Answers:

Question: Is the purchase of the 5 Taco Multi-purpose valves part of the contractor's scope?

Answer: Yes.

Q: Can the new concrete pad being added in front of tanks "A" and "B" be poured in 2 sections with an expansion joint?

A: Yes

Q: Is the purchase of the flame detectors in the contractor's scope?

A: No, owner will purchase flame detectors.

Q: Do the discharge lines from the thermal reliefs on the new LNG pump skid connect to the 3" header that runs to the remote vent stack or do they run to the stack individually.

A: The discharge lines connect to the 3" header and only the header runs to the stack.

Q: Is the purchase of the LNG tank level and pressure transmitters in the contractor's scope?

A: Yes. Specifications to be provided.

Q: What is the specification for the sump pump for the impoundment basin?

A: Specification to be provided.

Q: Who will locate the private utilities contained within the fenced area?

A: Owner will locate their facilities within the fenced in area at the LNG Plant, however, it will be the responsibility of the contractor to maintain a valid locate ticket while performing any excavation work.

Q: What material is the discharge pipe from the sump pump?

A: Polyvinyl Chloride (PVC)

INSTRUMENTATION SPECIFICATION**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes instrumentation for process piping systems.
- B. Related Sections include the following:
 - 1. Division Five Section 05500 for Metal Fabrications.
 - 2. Division Fifteen Section 15050 for Basic Mechanical Materials and Methods.
 - 3. Division Fifteen Section 15075 for Mechanical Identification.
 - 4. Division Fifteen Section 15194 for LNG and Natural Gas Piping.

1.3 DEFINITIONS

(Not Used)

1.4 ASSEMBLY DESCRIPTION

- A. Process Piping Contractor shall mechanically install instrumentation in accordance with Contract drawings. Site Electrical Contractor shall be responsible for wiring of all instrumentation devices.

1.5 PERFORMANCE REQUIREMENTS

- A. All instrumentation shall meet, as a minimum, the Manufacturer's standard performance specifications.

1.6 SUBMITTALS

- A. Product Data: For each type of product indicated. Five copies of data listed below shall be submitted to Engineer.
- B. Product Data: For the following:
 - 1. Transmitters (pressure & differential pressure).
 - 2. Solenoid Valves.
 - 3. Digital Loop-Powered Indicators.

4. Panel-Mounted Loading Regulators.
- C. Product Data: Include rated capacities; shipping, installed, and operating weights; furnished specialties; and accessories.
- D. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 1. Wiring Diagrams: Power, signal, and control wiring.
- E. Product Certificates: For each type of instrumentation listed above, signed by product manufacturer.
- F. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.
- G. Operation and Maintenance Data: For instrumentation listed above to include in emergency, operation, and maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Instrumentation shall be provided as specified unless substitutions are approved by Engineer.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of instrumentation described in the Section and are based on the specific system indicated.
 1. Modifications will not be accepted without Engineer's prior approval. If modifications are proposed, comprehensive explanatory data must be submitted to Engineer for review.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 4. Store products to allow for inspection and measurement of quantity or counting of units.

5. Store products under cover in a weather-tight enclosure above ground, with ventilation adequate to prevent condensation.
 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 7. Protect stored products from damage.
- B. Storage: Provide a secure location and enclosure at Project site for storage of materials and equipment. Coordinate location with Engineer's site representative.

1.9 PROJECT CONDITIONS

(Not Used)

1.10 COORDINATION

- A. Coordinate layout and installation of instrumentation with Engineer's site representative.
- B. Coordinate size and location of concrete bases for instrumentation with Engineer's site representative.

PART 2 - PRODUCTS

2.1 PRESSURE TRANSMITTERS

- A. Manufacturer: Emerson - Rosemount
- B. Medium: Natural Gas
- C. Model No.: 3051T-G-2-A-2B-2-1-A-S5-E5-B4-Q4-M5-T1-S5
- D. Description:
 - G Transmitter Type: Gage Pressure
 - 2 Pressure Range: -14.7 to 150 psi/1.5 psi
 - A Output: 4-20 mA with Digital Signal Based on Hart Protocol
 - 2B Process Connection Style: ½-14 NPT Female
 - 2 Isolating Diaphragm/Process Connection Wetted Parts Material: 316L SST
 - 1 Fill Fluid: Silicone
 - A Housing Material/Conduit Entry Size: Polyurethane-covered Aluminum/ ½-14 NPT

Options:

- S5 Assemble to Model 306 Manifold
 - E5 FM Explosion-Proof Approval
 - B4 Bracket for 2-in. Pipe or Panel Mounting, All SST
 - Q4 Calibration Data Sheet
 - M5 LCD Meter for Aluminum Housing
 - T1 Transient Protection Terminal Block
1. Calibration: 0 to 150 psig

2. Tags: "PIT-C-1", "PIT-D-1"

2.2 DIFFERENTIAL PRESSURE TRANSMITTERS

- A. Manufacturer: Fisher-Rosemount
- B. Medium: Natural Gas
- C. Model No.: 3051CD-2-A-0-2-A-1-A-S5-E5-Q4-M5-T1
- D. Description:

CD Transmitter Type: Differential Pressure
2 Pressure Range: -250 to 250 inH₂O/25 inH₂O
A Output: 4-20 mA with Digital Signal Based on Hart Protocol
0 Process Flange Type: Alternate Flange (see options)
2 Isolating Diaphragm: 316L SST
A O-Ring: Glass-filled TFE
1 Fill Fluid: Silicone
A Housing Material/Conduit Entry Size: Polyurethane-covered Aluminum/ ½-14 NPT

Options:

S5 Assemble to Model 305 Integral Manifold
E5 FM Explosion-Proof Approval
Q4 Calibration Data Sheet
M5 LCD Meter for Aluminum Housing
T1 Transient Protection Terminal Block

1. Calibration: 0 to 100 inH₂O
2. Tags: "DPIT-C-1", "DPIT-D-1"

2.3 SOLENIOD VALVES

- A. Manufacturer: ASCO Red-Hat
- B. Medium: Instrument Air
- C. Operating Pressure: 80 psig
- D. Model No.: EF8321G001-24 VDC
- E. Description:
 1. Type: 3-way Pilot Operated, Quick Exhaust
 2. Solenoid Enclosure: Molded Epoxy, Explosion Proof & Watertight
 3. Electrical: 24 VDC
 4. Coil: Continuous Duty Molded Class F
 5. Operating Position: Normally Closed (closed when de-energized)
 6. Body: Brass

7. Process Connection: 1/4-in. NPT, Female
8. Approvals: CSA & UL Listed
9. Tags: "SOV-A-116", "SOV-B-116", "SOV-C-116", "SOV-D-116"

2.4 DIGITAL LOOP POWERED INDICATORS

- A. Manufacturer: DEVAR Inc.
- B. Model No.: LD-LPIX
- C. Description:
 1. Input: 4 to 20 mA
 2. Display Type: 3 1/2 Active Digits (fixed R.H. zero) LCD
 3. Character Height: 1.0 in.
 4. Characters: 1.8.8.8
 5. Decimal Points: 4 Position (or absent)
 6. Polarity Indication: Negative Sign or none, switch selectable
 7. Overall Blanks: 4 Digits
 8. Housing: explosion proof & watertight, panel surface mount, corrosion resistant
 9. Approvals: Factory Mutual (FM)

2.5 PANEL-MOUNTED LOADING REGULATORS

- A. Manufacturer: Fisher
- B. Medium: Instrument Air
- C. Inlet Pressure: 80 psig (max.)
- D. Description:
 1. Type: 670G, 2-Gauge Panel; Regulator has Filter
 2. End Connections:
 - a. Inlet: 1/4-18 NPT Female
 - b. Outlet: 1/4-18 NPT Female
 3. Outlet Pressure Range: 3 to 18 psig
 4. Construction Materials:
 - a. Panel Tubing: 316 SS
 - b. Regulator Body: Die-cast Aluminum
 - c. Regulator Spring Case: Die-cast Zinc/Stainless Steel
 - d. Panel: Zinc
 - e. Filter Cartridge: Cellulose
 5. Pressure Gauge Range:
 - a. Inlet: 0 to 160 psig
 - b. Outlet: 0 to 30 psig

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas of installation with Engineer's site representative for compliance with requirements for installation, and other conditions affecting performance of work.

3.2 PREPARATION

(Not Used)

3.3 INSTALLATION

- A. Instrumentation shall be installed as indicated on Contract drawings and/or Engineer's site representative's direction.

3.4 APPLICATION

(Not Used)

3.5 CONNECTIONS

- A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, tubing, fittings, and specialties.
- B. Tighten tubing connections according to manufacturer's published torque values and/or tightening instructions.
- C. All electrical housings and connections shall be left weather-tight after installation.

3.6 FIELD QUALITY CONTROL

- A. Testing: Engineer will perform field quality control testing.
- B. Remove malfunctioning units and replace with new units.

3.7 STARTUP SERVICE

- A. Engineer will perform startup services.

3.8 ADJUSTING

- A. Adjust LCD displays of transmitters to proper angle for best visibility.

3.9 CLEANING

- A. Clean windows of LCD displays and clean factory finished surfaces. Replaced cracked and broken windows, and repair scratched and marred surfaces with Manufacturer's touchup paint.
- B. After completing system installation, remove burrs, dirt, and construction debris.

3.10 PROTECTION

(Not Used)

3.11 DEMONSTRATION

(Not Used)

END OF SECTION

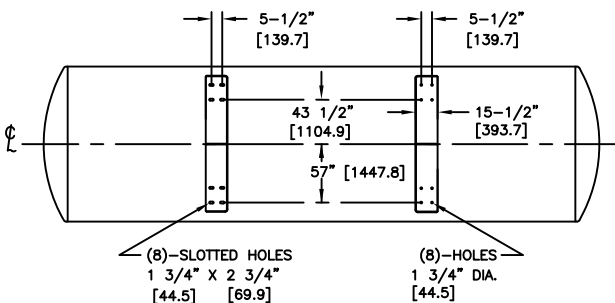
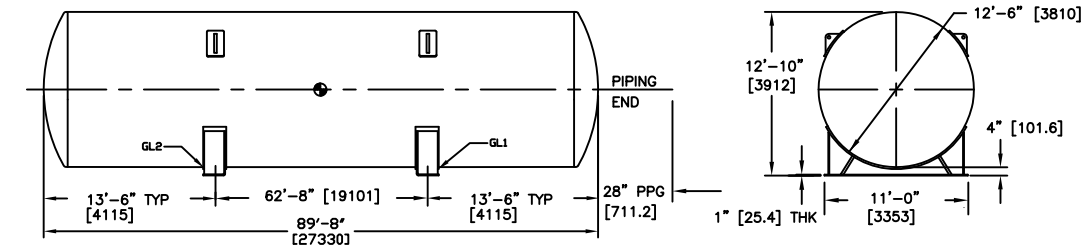
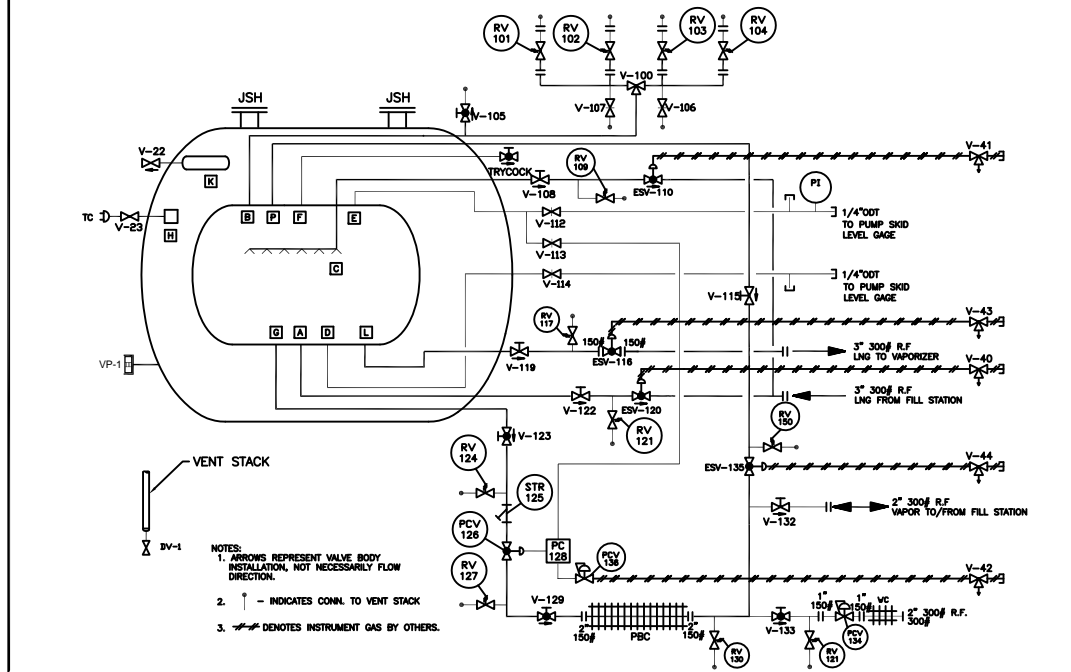


**DATA SHEET
SUMP PUMP
GUC LNG FACILITY PHASE IIB EXPANSION
June 26, 2014**

REQUIREMENTS

QTY	DESCRIPTION
1	Sulzer Submersible Pump
	<ul style="list-style-type: none">• Model: Type ABS XPF 80C
	<ul style="list-style-type: none">• Pump Discharge: 3" ANSI Flange
	<ul style="list-style-type: none">• Service: Rain Water
	<ul style="list-style-type: none">• Installation: Fixed Wet Well with ABS Automatic Coupling System
	<ul style="list-style-type: none">• Design Capacity: 212.5 gpm
	<ul style="list-style-type: none">• Design Head: 7 ft TDH
	<ul style="list-style-type: none">• Pump Driver
	<ul style="list-style-type: none">• Type: Premium Efficiency Electric Motor
	<ul style="list-style-type: none">• Power Available: 480V, 3 PH, 60 Hz
	<ul style="list-style-type: none">• Duty: Continuously Rated Motor, Submersible
	<ul style="list-style-type: none">• Starting: Across the Line
	<ul style="list-style-type: none">• Accessories
	<ul style="list-style-type: none">• Three (3) float switches with cable weights for stop & run control and hi-level alarm with stainless steel float switch bracket
	<ul style="list-style-type: none">• Single Guide Rail Assembly with pedestal, 90° cast bend, pedestal bracket fasteners, and pedestal base anchor bolts
	ADDITIONAL REQUIREMENTS
5	<ul style="list-style-type: none">• Copies O&M Instructions Manual
5	<ul style="list-style-type: none">• Copies Technical Bulletin
5	<ul style="list-style-type: none">• Copies Performance Curve
	<ul style="list-style-type: none">• One electronic copy of the above documentation may be provided instead of the above hard copy quantities.

Chart Inc. Storage Systems Division



NOTES:

- BACKUP STRIPS AND JOGGLE JOINTS ACCEPTABLE.
- INNER VESSEL BUILT AND STAMPED PER ASME SECTION VIII DIV.1, LATEST EDITION AND ADDENDA.
- TANK IS SHIPPED WITH 68.9-103.4 KPAG (10-15 PSIG) NITROGEN PRESSURE IN INNER VESSEL.
- ALL PIPE (A312), TUBE (A269) AND FITTINGS (A403) TO BE 304/L DUAL GRADE STAINLESS STEEL SEAMLESS.
- DESIGN AND FABRICATION PER 49 CFR PART 193 AND APPLICABLE NFPA 59A CHAPTER 13 SECTIONS.
- PIPING 2" AND OVER SHALL BE SCH 10 MIN. PIPING UNDER 2" SHALL BE SCH 40 MIN.
- WIND & SEISMIC DESIGN BASIS: ASCE 7-10. SEISMIC: S_s: 1.85 g, S₁: 0.85 g, SITE CLASS D. WIND: 150 MPH, EXPOSURE CATEGORY D, OCCUPANCY CATEGORY III.
- LIFT PLATES ARE LOCATED ON THE NON-PLUMBING VESSEL HEAD. LIFT PLATES ARE 570.
- VACUUM PUMP-OUT PORT CONNECTION LOCATED ON EACH HEAD.
- PIPING WELDS TO BE 100% RADIOGRAPHED. ALL OTHER PIPE WELD JOINTS (SOCKET WELDS) TO BE 100% DYE PENETRANT EXAMINED. LINES TO ATMOSPHERE DO NOT REQUIRE NDE. 3"NPS AND LARGER MUST BE BUTT WELD.
- ALL FLANGES TO BE 300# RAISED FACE A182 F304L S/S.
- ALL TUBE FITTINGS TO BE SWAGelok.

VESSEL DESIGN DATA		
HS-55000SS-100		
INNER VESSEL	DESIGN STANDARD	ASME SECT VIII, DIV 1 COLD STRETCHED, 2014
	MAWP	100 PSIG
	DESIGN TEMPERATURE	-320°F TO +120°F
	HYDROSTATIC TEST PRESSURE	223 PSIG
	VESSEL MATERIALS	SA-240 T304
	CODE STAMP	YES
	RADIOGRAPH	RT-1
Code ASME Section VIII Division 1 Latest Addenda, Cold Stretched Inspected by National Board Inspectors National Board Registration Required		
OUTER VESSEL	DESIGN STANDARD	CGA-341-2007
	MAWP	206.8 KPAG / 30 PSIG (FULL VACUUM)
	DESIGN TEMPERATURE	-20°F TO +300°F
	VESSEL MATERIAL	SA36 CARBON STEEL
	INSULATION	MULTI LAYER SUPER INSULATION WITH VACUUM
	GRIT BLASTING	YES
	PAINTING	HENTZEN 2-COAT WHITE
WEIGHTS	EMPTY	118,200 LBS
	FULL OF LNG	313,700 LBS
CAPACITY	FULL OF WATER	56,200 GAL
	NET VOLUME (COLD)	50,100 GAL
PIPING PER ASME/ANSI B31.3, LATEST EDITION		

LINE	INTERNAL LINE SIZES	FUNCTION
A	2" NPS, SCH 10	LIQUID IN - BOTTOM FILL
B	2" NPS, SCH 10	VAPOR LINE
C	2" NPS, SCH 10	LIQUID IN - TOP FILL SPRAY BAR
D	1/4" ODT	GAUGE LINE FOR BOTTOM LIQUID SPACE PRESSURE
E	1/4" ODT	GAUGE LINE FOR VAPOR SPACE PRESSURE
F	1/4" ODT	90% LIQUID LEVEL TRYCOK
G	1" NPS, SCH 40	LIQUID OUT TO PRESSURE BUILD COIL
K	-	ANNULAR SPACE VACUUM CONNECTION
L	3" NPS, SCH 10	LIQUID OUT TO VAPORIZER
P	2" NPS, SCH 10	PRESSURE BUILD VAPOR
H	-	ANNULAR SPACE VACUUM THERMOCOUPLE CONN PORT



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CUSTOMER DRAWING FOR:

GREENVILLE UTILITIES CORPORATION

LNG STORAGE EXPANSION

REF. NO. GRN-0056-D5

MODEL HS-55000SS-100CS LNG TANK

JOB. NO. 2010335 Tanks 09.24.13 PE# 20757696 PART No. 20757697

APPROVALS BY DATE SHEET 1 OF 2

DRAFTER DVL 02/25/2014 A-20773275 A

CHECKER ENGINEERING DESIGN TDH 5/15/2000 DRAWING NO. REV.

NO	DATE	BY	CHKD	RECORD OF REVISION
1	5/15/2014	RDF	JC	UPDATE SADDLE SPACING TO 62"8"

COMPONENT LISTING				
TAG	FUNCTION	DESCRIPTION	SIZE	P/N
V-122	TANK BOTTOM FILL SHUT-OFF	GATE, GODDARD GS-00110-16V3A, BW	2"	1716681
V-105	TANK VENT VALVE	GLOBE, GODDARD GS-00210-16V3A, BW	2"	1715821
V-108	TANK TOP FILL SHUT-OFF	GATE, GODDARD GS-00110-16V3A, BW	2"	1716681
V-123	TANK P.B. LIQUID SHUT-OFF	GLOBE, GODDARD GS-00210-8S3, SW	1"	1719141
V-119	TANK LIQUID DELIVERY SHUT-OFF	GATE, GODDARD GS-00110-24V3A, BW	3"	1716531
V-115	TANK P.B. VAPOR SHUT-OFF	GATE, GODDARD GS-00110-16V3A, BW	2"	1716681
V-129	P.B. LIQUID SHUT-OFF	GLOBE, GODDARD GS-00210-8S3, SW	1"	1719141
V-132	TANK VAPOR BALANCE	GATE, GODDARD GS-00110-16V3A, BW	2"	1716681
V-133	ECONOMIZER ISOLATION	GLOBE, GODDARD GS-00210-8S3, SW	1"	1719141
TRYCOCK	TANK FULL TRYCOCK	GLOBE, GODDARD GS-00210-4S3, SW	1/2"	20785622
V-100	TANK SAFETY VALVE SELECTOR	BALL, WORCESTER C4466PMSV1, SW	2"	894.252
ESV-110	TANK TOP FILL CONTROL	GLOBE, FISHER EZ-C, FLANGED 300# ACT, FISHER xxxx LIMIT SWITCHES, WESTLOCK BECON 2007NBY2E2M0200	2"	20773654
ESV-116	TANK LIQUID DELIVERY EMERGENCY SHUT-OFF	BALL, WORCESTER CAF466PT301, WAFER ACT, WORCESTER 3339SN LIMIT SWITCHES, WESTLOCK BECON 2007NBY2E2M0200	3"	20773651
ESV-120	TANK BOTTOM FILL CONTROL	GLOBE, FISHER EZ-C, FLANGED 300# ACT, FISHER xxxx LIMIT SWITCHES, WESTLOCK BECON 2007NBY2E2M0200	2"	20773654
ESV-135	P.B. VAPOR EMERGENCY SHUT-OFF	BALL, WORCESTER CAF466PMBV10, BW ACT, WORCESTER 2039SN LIMIT SWITCHES, WESTLOCK BECON 2007NBY2E2M0200	2"	20773642
PCV-126	TANK P.B. CONTROL VALVE	GLOBE, CASHCO 2296 46C-2A17-23V300N6D, NPT	1'	20773653
PC-128	TANK P.B. CONTROLLER	PART OF PCV-126	-	-
PCV-136	TANK PC-1 SUPPLY REGULATOR	PART OF PCV-126	1/4"	-
PCV-134	TANK ECONOMIZER REGULATOR	REGULATOR, CASH-ACME FR 40-200, SET AT 85	3/4"	20785624
RV-109	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-117	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-121	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-124	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-127	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-150	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-1XX	THERMAL RELIEF VALVE	RELIEF VALVE, FLOWSAFE F84M, NPT S844M-05MNO-05FNO-SS-SS-BT	1/2"x1/2"	20773655
RV-130	PRESSURE RELIEF VALVE, P.B. OUTLET	RELIEF VALVE, FLOWSAFE P835D, NPT P835D-01FNO-02FNO-SS-SS-TNPT, SET AT 150 PSIG	1"x2"	20786107
RV-101	PRESSURE RELIEF VALVE, PRIMARY SAFETY	RELIEF VALVE, FLOWSAFE F835D, NPT P835D-01FNO-02FNO-SS-SS-TNPT, SET AT 100 PSIG	1"x2"	20785628
RV-102	PRESSURE RELIEF VALVE, SECONDARY SAFETY	RELIEF VALVE, FLOWSAFE F7350, NPT P7350-01FNO-02FNO-SS-SS-TNPT, SET AT 110 PSIG	1"x2"	20785629
RV-103	PRESSURE RELIEF VALVE, PRIMARY SAFETY	RELIEF VALVE, FLOWSAFE F835D, NPT P835D-01FNO-02FNO-SS-SS-TNPT, SET AT 100 PSIG	1"x2"	20785628
RV-104	PRESSURE RELIEF VALVE, SECONDARY SAFETY	RELIEF VALVE, FLOWSAFE F7350, NPT P7350-01FNO-02FNO-SS-SS-TNPT, SET AT 110 PSIG	1"x2"	20785629
V-40	PNEUMATIC SHUT-DOWN VALVE	3-WAY, SWAGelok SS-44XS6-SC11	3/8"	20773641
V-41	PNEUMATIC SHUT-DOWN VALVE	3-WAY, SWAGelok SS-44XS6-SC11	3/8"	20773641
V-42	PNEUMATIC SHUT-DOWN VALVE	3-WAY, SWAGelok SS-44XS6-SC11	3/8"	20773641
V-43	PNEUMATIC SHUT-DOWN VALVE	3-WAY, SWAGelok SS-44XS6-SC11	3/8"	20773641
V-44	PNEUMATIC SHUT-DOWN VALVE	3-WAY, SWAGelok SS-44XS6-SC11	3/8"	20773641
DV-1	VENT STACK DRAIN VALVE	BALL, APOLLO SELF-CLOSING 76-503-57	1/2"	1714861
PBC	TANK PRESSURE BUILD COIL	ALUMINUM FINNED TUBE	-	-
WC	BOIL-OFF WARMING COIL	ALUMINUM FINNED TUBE	-	-
JSH	JACKET SAFETY HEADS	CHART STANDARD	6"	10899110
TC	TANK VACUUM GAUGE TUBE	HASTINGS DV-6R	-	4210049
V-137	TANK VACUUM GAUGE ISOLATION	BELLOWS, HDKE 4111L2B	1/8"	10482381
VP-101	TANK VACUUM PUMPOUT	CHART STANDARD PUMPOUT	3-1/2"	10826172
V-106	TANK SAFETY TEST VALVE	NEEDLE, SWAGelok SS-1KM4-S4-A-SC11	1/4"	11076684
V-107	TANK SAFETY TEST VALVE	NEEDLE, SWAGelok SS-1KM4-S4-A-SC11	1/4"	11076684
V-112	TANK TOP GAUGE LINE SHUT-OFF	NEEDLE, SWAGelok SS-1KM4-S4-SC11	1/4"	11699814
V-113	P.B. CONTROLLER SIGNAL SHUT-OFF	NEEDLE, SWAGelok SS-1KM4-S4-SC11	1/4"	11699814
V-114	TANK BTM GAUGE LINE SHUT-OFF	NEEDLE, SWAGelok SS-1KM4-S4-SC11	1/4"	11699814
STR-125	P.B. STRAINER	STRAINER, MUELLER 582 WYE -TYPE 100 MESH, SW	1"	469.045
PI-1	TANK PRESSURE GAUGE	US GAUGE, 0-200 PSI, 4.5" DIAL, 1981-155027	1/4"	534.235

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CUSTOMER DRAWING FOR: GREENVILLE UTILITIES CORPORATION LNG STORAGE EXPANSION REF. NO. GRN-0056-D5 MODEL HS-55000SS-100 LNG TANK			
JOB. NO. 2010335 Tanks 09.24.13		PE# 20757696	PART No. 20757697 20757696
APPROVALS		BY	DATE
DRAFTER		DVL	02/25 2014
CHECKER		A-20773275 A	
ENGINEERING DESIGN		TDH	5/15 2000
DRAWING NO.		REV.	