



Invitation to Bid

Class I Deep Injection Well System

Bid # 11-19W

(Revised 3/16/2011)

**City of Sarasota
Utilities Department**

Issued by the City of Sarasota
Purchasing Division

Bid submittals to be received by Purchasing

May 17, 2011, before 2:30 PM

in the Office of the Purchasing Manager
1565 First Street, Room 205
Sarasota, Fl. 34236
Ph. #(941) 954-4151



Notice to Contractors
Bid # 11-19W

INVITATION TO BID

The City of Sarasota will receive sealed bids until **2:30 p.m. on May 17, 2011**, then and there to be publicly opened and read aloud for the purpose of selecting a qualified Water Well Contractor to furnish: all necessary labor, materials, equipment, tools, consumables, transportation, skills and incidentals required for the construction of a Class I Deep Injection Well System for the City of Sarasota Utilities Division, Sarasota, Florida, in conformance with Contract Documents, which include construction plans and technical specifications. The project includes the construction of one Class I Deep Injection Well, one Upper Zone Monitor Well, one Lower Zone Monitor Well, and four Shallow Pad Monitor Wells at the City of Sarasota Waste Water Treatment Plant. The project is scheduled to take 365 calendar days to complete after the date of Notice to Proceed is issued to the Contractor.

Bids shall be submitted in writing, signed by the bidder or the bidder's duly authorized agent, and shall be received by the Purchasing Department, located at 1565 First Street, Room 205, Sarasota, Florida 34236 prior to the time scheduled to receive bids. Bid documents shall be sealed in an envelope and shall be clearly marked **Bid # 11-19W Class I Deep Injection Well System**, along with the date and time of the bid opening. Insurance certificates, bonds, and/or checks required by the specifications to be submitted with the bid **must reference the bid number**.

Plans and specifications for this project are available from DemandStar at (800) 711-1712 or by their Internet address at www.demandstar.com. Vendors who obtain specifications and plans from sources other than DemandStar are cautioned that the bid package may be incomplete. The City's official bidders list is obtained from DemandStar. Addenda will be posted and disseminated by DemandStar at least five days prior to the bid opening date to all vendors who are listed on the official bidders list. The City may not accept incomplete bids.

A Mandatory Pre-Bid conference has been scheduled for 10:00am on April 20, 2011 in the City of Sarasota Public Works First Floor Meeting Room located at 1761 12th Street, Sarasota, Florida 34236 for the purpose of discussing this project. Prospective bidders are required to attend. All prospective bidders are encouraged to obtain and review plans and specifications for this project prior to the Pre-Bid Conference so that they may be prepared to discuss any question or concerns they have concerning this project.

Attention is called to the fact that **the City has adopted a "Minority Business Enterprise" Utilization Plan.**

Questions regarding this Invitation to Bid are to be directed, in writing, to Kenneth Williams using email address: kenneth.williams@SarasotaGov.com or faxed to (941) 954-4157 during normal working hours.

The bid forms, and required attachments, are to be **submitted in triplicate** (one original and two photocopies) on the form provided therefore. Bids in excess of **fifty-thousand dollars (\$50,000.00)** shall be accompanied by a cashier's check or bid bond made payable to the City of Sarasota, Florida, in an amount of not less than five (5) percent of the total bid price. When the contract is in excess of \$50,000, the successful contractor will be responsible for recording the payment and performance bond in the public records of Sarasota County Clerk of Circuit Court. Proof of such recording must be provided to the Purchasing Department with the performance bond. A Notice to Proceed will not be issued until a receipt documenting such action is provided to the City of Sarasota Purchasing Department.

Bids received after the scheduled time for closing will not be considered. Any envelopes received late will be returned to the bidder unopened.

No bids may be withdrawn after the scheduled closing time for receipt of bids.

The City of Sarasota, Florida, reserves the right to reject any or all bids, or any parts of a bid, or to waive any irregularities and informalities in the bid process; and to award a contract to the lowest responsive and responsible bidder.

Sincerely,



Mary G. Tucker, CPPO, FCPM
Purchasing Manager

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GENERAL PROVISIONS

1. SCOPE OF WORK

The successful bidder shall be responsible for furnishing all equipment, labor materials and tools and incidentals required for the Construction of a Class I Deep Injection Well System per the specifications for the City of Sarasota, Sarasota, Florida, in conformance with Contract Documents, which include construction plans and technical specifications. The project is to be completed within 365 Calendar Days after the date of the Notice to Proceed.

2. SUBMISSION OF BID DOCUMENTS

- A. All bid documents shall be submitted in writing, signed by the bidder or the bidder's duly authorized agent, and shall be mailed or delivered to the office of the Purchasing Manager prior to the time scheduled for the opening of bids.
- B. Bid documents shall be sealed in an envelope and shall be clearly marked with the words "bid documents" and show the project name and number, name and address of the bidder, and date and time of the scheduled bid opening.
- C. The Purchasing Manager or his/her designee, in the presence of the City Auditor and Clerk or his/her designee shall publicly open all bid documents at the time and place specified in the invitation to bid.
- D. A bidder may withdraw a bid any time prior to the opening of the bid. After bids are opened, but prior to award of the contract by the City Commission, the City Commission may allow the withdrawal of a bid because of the mistake of the bidder in the preparation of the bid document. In such circumstance, the decision of the City Commission to allow the bid withdrawal, although discretionary, shall be based upon a finding that the bidder, by clear and convincing evidence, has met each of the following four tests:
 - 1. The bidder acted in good faith in submitting the bid:
 - 2. The mistake in bid preparation that was of such magnitude that to enforce compliance by the bidder would cause a severe hardship on the bidder,
 - 3. The mistake was not the result of gross negligence or willful inattention by the bidder; and
 - 4. The mistake was discovered and was communicated to the City prior to the City Commission having formally awarding the contract.

3. INTERPRETATION OF ESTIMATED QUANTITIES

The estimated quantities of work to be done and materials to be furnished under this contract, given in the bid forms, are to be considered as approximate only and are to be used solely for the comparison of bids received. The City does not expressly or by implication represent that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimate of quantities or of the character, location or other conditions pertaining to the work. Payment to the contractor will be made only for the

actual quantities of work performed or materials furnished in accordance with the contract documents, and it is mutually understood that the quantities may be increased or diminished as provided in the Standard Specification (FDOT) without in any way invalidating any of the unit or lump sum prices bid.

4. **EXAMINATION OF CONTRACT DOCUMENTS AND SITE**

The bidder shall carefully examine the site of the work and the contract documents for the work contemplated, and it will be assumed that the bidder has investigated and is fully informed of the conditions and obstructions to be encountered, of the character, quality and quantities of work to be performed and materials to be furnished and of the requirements of the contract documents. The bidder shall inform himself fully of the conditions under which the work is to be performed in relation to both construction and labor conditions. Failure to do so will not relieve a successful bidder of his obligations to furnish all materials, equipment and labor necessary to carry out the provisions of the contract documents and to complete the contemplated work for the consideration set forth in his bid.

Failure to attend a mandatory Pre-Bid Conference, if officially noted on the Invitation to Bid, will result in your Bid being considered non-responsive.

5. **PREPARATION OF BID DOCUMENTS**

Bid documents shall be submitted in triplicate (one original and two photocopies) on the bid forms provided by the City. All blank spaces in the bid forms shall be filled in legibly and correctly in ink. The bidder shall specify the price per unit of measure and the extended total, or the lump sum bid price if such is called for, for each scheduled item of work as well as the total price for the entire work under the contract. If an individual makes the bid, he shall sign his name therein and state his name and address, as well as the name and address of every other person interested in the bid, as principal. If the bid is made by a firm or partnership, its name and address shall be stated as well as the name and address of each member of the firm or partnership. If a corporation makes the bid, an authorized officer shall sign it or agent, subscribing the name and address of the corporation along with his own name and affixing the corporation seal.

6. **ADDENDA-CHANGES WHILE BIDDING**

Except at the pre-bid conference, every request for interpretation of the meaning of the plans, specifications or any contract documents, or for correction of any apparent ambiguity, inconsistency or error therein, shall be in writing, addressed to the *Purchasing Manager*. The request shall be received at least **eight (8) calendar days** prior to the opening of the bids in order to be given consideration. No such interpretation or correction will be orally made to any bidder. Only the interpretation or correction so given by the City Purchasing Manager, in writing, shall be binding, and prospective bidders are warned that no other source is authorized to give information concerning, or to explain or interpret, the contract documents. All such interpretations and supplemental instructions will be in the form of written addenda to the contract documents which, if issued, will be mailed or "faxed" to all persons who acquired the contract documents (at their respective addresses furnished for such purposes) not later than five (5) calendar days prior to the date fixed for the opening of bids. In case any bidder fails to acknowledge receipt of any such addendum in the space provided in the bid forms, his bid will nevertheless be construed as though the addendum has been received and acknowledged, and the submission of the bid will constitute acknowledgement of the receipt of the same.

7. **BONDS**

A. **BID GUARANTY**

All bids, where the total amount bid is in excess of \$50,000, shall be accompanied by a cashier's check or a bid bond with a corporate surety, in an amount of not less than five percent (5%) of the total amount bid, made payable to the "City of Sarasota". The bid guaranty shall insure the execution of the contract agreement and the furnishing of performance and payment bond or bonds, by the successful bidder. The bid guaranty of unsuccessful bidders will be returned as soon as practicable after the opening of the bids.

B. **PERFORMANCE & PAYMENT BOND, EXECUTION OF CONTRACTS**

Where the total contract price is in excess of \$50,000, the contractor shall furnish a performance and payment bond to the favor of the City of Sarasota, as follows:

1. Within ten (10) days after the contractor has been issued a "notice of award", the successful bidder shall execute and deliver to the City a contract agreement in the form provided and in such number of counterparts as the City may require.
2. Having satisfied all conditions as set forth elsewhere in these documents, the successful bidder shall furnish a performance and payment bond (public construction bond) equal to one hundred percent (100%) of the total contract amount for the security of the faithful performance of this contract and for the payment of all persons performing labor and furnishing materials in connection therewith in the forms required by Florida Statutes 255.05 together with power of attorney showing authorization of the surety's agent to execute the bond. These bonds shall remain in effect at least one (1) year after the date when the final payment is approved. It shall be the contractor's responsibility to record a copy of the bond in the public records of Sarasota County Clerk of circuit Courts and provide proof of such recording to the City Purchasing Department with the performance bond.
3. The failure of the successful bidder to execute such contract agreement and to supply the required bond(s) within said ten (10) business days, or within such extended time as the City may grant, based upon reasons determined adequate by the City, shall constitute a default. The City may then either award the contract to the next responsible bidder or re-advertise for bids, and may charge the bidder the difference between the amount of the bid and the amount for which a contract for work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guaranty.

C. **BOND FORMS**

The attached bond forms may be utilized. Any bonding company submitting a bid bond or performance and payment bond to the City must be licensed to transact as a fidelity and surety business in the State of Florida and hold a certificate of authority from the Secretary of the Treasury under Act of Congress approved July 30, 1947 (U.S.C. 6-13), and approved by the City of Sarasota. Acceptable surety companies shall be licensed to do business in Florida and shall have an A.M. Best & Company rating of "A" or better and a "T" underwriting limitation not exceeded by this project's bond.

8. NON-COLLUSIVE AFFIDAVIT

Each bidder shall execute an affidavit, in the form provided by the City, to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the bid form

9. LAWS, ORDINANCES AND REGULATIONS

The work shall conform to the requirements of all local, state and federal laws, ordinances and regulations. Each bidder shall execute the statement relating to Florida Trench Safety Act. In accordance with Section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases or real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 for Category Two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

10. PERMITS AND FEES

The contractor shall obtain all necessary permits and pay for same prior to commencement of work. The cost of such permits shall be included within the base bid, unless otherwise provided for in the bid forms.

11. TAXES

The City of Sarasota does not pay Federal Excise and State Taxes on direct purchases of tangible personal property. The exemption number will be provided on the "vendors" copy of purchase order. This exemption does not apply to tangible personal property purchased by contractors for their use in the performance of this contract.

12. BIDS SUBMITTED BY ADVISORY BOARD MEMBERS

Section 112.313(7), Florida Statutes (1989), prohibits a City of Sarasota Advisory Board member from holding any employment or contractual relationship with any business entity, which is doing business with the City.

Section 112.313(12), Florida Statutes (1989), provides that an advisory board member will not be in violation of the prohibition in Section 112.313(7), Florida Statutes (1989), if:

- A. The bid is awarded under a system of sealed, competitive bidding to the lowest or best bidder. In addition, the advisory board member shall, prior to or at the time of the submissions of the bid, file a statement with the supervisor of elections of Sarasota County, disclosing his interest and the nature of the intended business. The form, which will be used, is entitled "Form 3A Interest in Competitive Bid for Public Business," a copy of which is available from the City's Department of Purchasing Division and Purchasing.

- B. The Advisory Board member, his spouse or child shall have in no way used or attempted to influence to persuade the City or any of its agents or employees to enter into such a contract other than by the mere submission of the bid.
- C. The Advisory Board member, his spouse or child shall have in no way participated in the determination of the contract documents or the determination of the lowest or best bidder.

All of the three above conditions shall be satisfied in accordance with the Florida Statutes. The filing of the disclosure form with the Supervisor of Elections is the sole responsibility of the bidder. A copy of the completed disclosure form shall be submitted to the City Purchasing Manager prior to or at the time of submission of the bid. Failure of the bidder to comply with the provisions of this paragraph may result in the rejection of the bid.

13. MINORITY BUSINESS ENTERPRISE POLICY

- A. The City Commission has established a Minority Business Enterprise (M.B.E.) Utilization Plan, Resolution No. OIR-1377, (Adopted August 6, 2001), whereby the city will assist in the development of opportunities for M.B.E.'s through the use of commodities, goods and services obtainable from M.B.E.'s, in conjunction with the award of this contract. Each bidder shall undertake to achieve a goal to place a portion of the total amount bid, as per the goals established in Florida Statutes 287.9451(4)(n) with one or more M.B.E.'s, including suppliers of materials, goods as well as services. The bidders shall document and include with their bid documents the full name and address of the M.B.E.'s, along with a description of the services, supplies, materials or goods and the allocation of the cost of the same as it relates to each M.B.E. utilized. Changes from those M.B.E.'s submitted with the bid will be subject to the approval of the City. All M.B.E.'s shall be certified as a Minority Business Enterprise by the State of Florida, Department of Management Services, Office of Supplier Diversity pursuant to Section 287.0943, Florida Statutes, or by state wide and inter-local agreement certification, as provided for by Section 287.0943(1), Florida Statutes.

i.e. The values are:

- 25% of the moneys actually expended for architectural and engineering contracts
- 24% of the moneys actually expended for commodities
- 50.5% of the moneys actually expended for contractual services
- 21% for construction contracts

- B. **A State of Florida M.B.E. Certificate or inter-local agreement M.B.E. Certificate from an agency having an inter-local agreement with the State of Florida must accompany the bid submission.**
- C. As used in this section, small Business, Minority Enterprise, Minority Person and Certified Minority Business Enterprise shall have the same meaning as those words are defined in Section 288.703, Florida Statutes, as amended.
- D. If a bidder does not allocate a portion of the total amount bid with a certified M.B.E., the bidder shall justify, in writing as part of his bid, the reasons why the contractor was unable to meet the M.B.E. participation goal. Adequate justification may include the

bidder being unable to find a M.B.E. possessing the required experience or licensing in order to provide the necessary subcontractor or materialman's services or the bidder's inability to find any M.B.E. within a specific trade or business.

Any bidder who fails to comply with the requirements of this M.B.E. utilization plan may have his bid declared non-responsive.

Should any bidder who is awarded this contract falsely represent to the City that it has complied with the requirements of this plan, and if it is subsequently determined by the City Manager that said contractor has not complied with this plan, as represented, the City Manager may terminate the subject contract under the provisions of the contract relating to a breach of contract by the contractor. Alternatively, the City Manager may elect to fulfill the terms of the contract but refuse to accept future bids from the contractor on the basis that the contractor is not a responsible contractor for City of Sarasota bidding purposes.

The Internet address below is for the State of Florida Office of Supplier Diversity. This State office can provide you with an online directory of all state certified minority business enterprises. Vendors appearing on this website will be accepted by the City as certified minority business enterprises. The required certificate as per the specifications should accompany your submission.

A phone number for the Office of Supplier Diversity has also been included for your use.

Internet Address: <http://mbaao.fdles.state.fl.us>

Phone: (850) 487-0915

14. LOCAL PREFERENCES IN PURCHASING AND CONTRACTING

Definitions:

City - The Term "*City*" shall mean a person, firm, corporation, or other business entity which is duly licensed and authorized to engage in the particular business at issue, and which has maintained a permanent place of business with full-time employees within the City limits of the City of Sarasota, for a minimum of one (1) year prior to the date bids were received for the purchase or contract at issue.

County - The Term "*County*" shall mean a person, firm, corporation, or other business entity which is duly licensed and authorized to engage in the particular business at issue, and which has maintained a permanent place of business with full-time employees within Sarasota County, for a minimum of one (1) year prior to the date bids were received for the purchase or contract at issue.

Non-local - All others

- *Post office boxes are not verifiable and shall not be used for the purpose of establishing said physical address.*
- *In order to be eligible for local preference, the vendor must provide a copy of the occupational license.*

Invitation to Bid - Competitive Bid - local price match option

Each formal competitive bid solicitation shall clearly identify how the price order of the bids received will be evaluated and determined. When a qualified and responsive, non-local business submits the lowest price bid, and the bid submitted by one or more qualified and responsive "City" businesses is within 5 percent of the price submitted by the non-local business, then the "City" business shall have the opportunity to submit, an offer to match the price(s) offered by the overall lowest, qualified and responsive bidder. In such instances, staff shall first verify if the lowest, non-local bidder and the lowest "City" bidder are in fact qualified and responsive bidders. If the lowest "City" bidder submits an offer that fully matches the lowest bid from the lowest non-local bidder tendered previously, then award shall be made to the "City" bidder. If the lowest "City" bidder declines or is unable to match the lowest non-local bid price then the option moves the next "City" business if within the five percent. If no "City" business is within the five percent and willing to match the non-local price(s) then the option goes to the "County" business if within two percent of the lowest non-local business.

Ties: In the event of any tie (either in the best and final bid price under a bid process, or in the point total in a proposal process) between a local city or county business, and a non-local business, a contract award, or the first opportunity to negotiate, as applicable, shall be made to the local city or county business. In the event of any tie between a local city business and a local county business, the local city business shall be awarded the contract or receive the first opportunity to negotiate, as applicable. In the event of any tie between a local city business and another local city business, or a local county business and another local county business, the local vendor with the greatest number of full-time employees working in the City of Sarasota or Sarasota County respectively, shall be awarded the contract or receive the first opportunity to negotiate, as applicable.

City of Sarasota, Ordinance 09-4849

15. AWARD OF CONTRACTS

Award of Contract, if made; will be to the lowest responsible and responsive bidder, taking into account Local Preference guidelines. In reviewing bids submitted, the City Manager shall take into consideration, when determining the lowest responsible and responsive bidder, the extent of compliance by each bidder with the requirements of the minority business enterprise utilization plan.

In respect to the bids, the City Manager shall make such recommendations to the City Commission, if applicable, as he shall deem proper, at the earliest practicable meeting of the City Commission. The City Commission shall either reject all bids, accept the bid of the lowest responsible and responsive bidder, or re-advertise the project for new bids. In the event the lowest responsible and responsive bid for a project exceeds the available funds, the City Manager, or his designee, may negotiate an adjustment of the bid price with the lowest responsible and responsive bidder, in order to bring the total cost of the project within the amount of available funds.

The City Commission may reject any or all bids for any reason whatsoever.

The City of Sarasota reserves the right to refuse to award to any bidder based upon prior contractual relationships between that bidder, or a substantially related person or entity, and the City. This shall

include, but is not limited to, situations in which the bidder or, a substantially related person or entity, has had its contractual relationship with the City terminated within three (3) years of the date of the issuance of this Invitation to Bid. This shall include, but is not limited to, situations in which the City has provided the bidder or, a substantially related person or entity, a notice of default within five (5) years of the date of the issuance of this Invitation to Bid.

16. IDENTICAL TIE BIDS

Whenever the City receives two or more bids that are equal with respect to price, quality, and service, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none or all of the tied bidders have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- A. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

The statement shall additionally notify the employees that, as a condition of working on the commodities or contractual services for this project, the employee shall abide by the terms of the statement and shall notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

- B. Give each employee engaged in providing the commodities or contractual services for this project, a copy of the statement specified in Subsection (1) above.
- C. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- D. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- E. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

17. INDEMNIFICATION

A. Non-Design Professional

The City shall not be liable for any loss, injury, death or damage to persons or property, which at any time may be suffered or sustained by any person whatsoever arising from the negligent performance by contractor and its employees and agents of its obligations under the provisions of this agreement. The contractor shall indemnify and hold harmless

the City, and agents and employees against all claims, liabilities, loss, injury, death or damage whatsoever, including but not limited to attorney fees, on account/or arising out of or resulting from any negligent act or omission of the contractor in the performance of the work. The City and contractor acknowledge that the first ten dollars (\$10.00) of the compensation paid contractor for its work hereunder shall be deemed specific consideration for this indemnification. Contractor shall fund the foregoing indemnification by providing the insurance coverage's set forth below.

B. Design Professional

Contractor shall indemnify and hold harmless the City, its elected and appointed officials, officers, employees and agents, from liabilities, damages, losses and costs, including but not limited to reasonable attorney's fee, to the extent caused by the negligence, recklessness or intentional wrongful conduct of the consultant or any person employed or utilized by the consultant in the performance of the contract. City and the Contractor acknowledge that the first ten dollars (\$10.00) of compensation paid Contractor for its services hereunder shall be deemed specific consideration for the indemnification

18. INSURANCE

The **Contractor**, prior to the signing an Agreement and before starting any work on this Agreement, shall procure and maintain, during the life of this Agreement, the insurance coverage listed below. The policies of insurance shall be primary and written on forms acceptable to the City. The policies shall be placed with an insurance carrier approved and licensed by the Insurance Department of the State of Florida and that meets a minimum financial A. M. Best & Company rating of no less than "A": Excellent. The City of Sarasota will not accept any indication or evidence of self-insurance made by the Contractor, as it applies to any of the required insurance coverage. Any and all fully-executed contracts will require that the Contractor be fully insured per the terms and conditions as follows herein:

A. Worker's Compensation

Worker's Compensation Insurance on behalf of all employees who are to provide a service for this Agreement, as required by Florida Statutes Chapter 440 and Employers Liability with limits of not less than \$100,000 per employee accident; \$500,000 disease aggregate; and \$100,000 employee per disease.

B. Commercial General Liability

Including but not limited to bodily injury, property damage, and personal injury, with limits of not less than One Million Dollars combined single unit per occurrence, Two Million Dollars per location aggregate plus property damage insurance in the minimum amount of Five Hundred Thousand Dollars covering all work performed.

C. Automobile Liability

Including bodily injury, property damage liability for all vehicles owned, hired, leased, and non-owned, with limits of not less than One Million Dollars combined single unit per occurrence covering all work performed.

D. Umbrella Liability

N/A unless being used to meet underlying coverage requirements.

E. Professional Liability

If applicable, in the minimum amount of One Million Dollars.

F. Hazardous Material

If work being performed involves hazardous materials, the need to procure and maintain any or all of the following coverage will be specifically addressed upon review of exposure. However, if hazardous materials are identified while carrying out this Agreement, no further work is to be performed in the area of the hazardous materials until the City's Risk Management Department has been consulted as to the potential need to procure and maintain any or all of the following coverage through a change order to the project:

1. Contractor's Pollution Liability

For sudden and gradual occurrences in the amount no less than \$1,000,000 per claim and \$2,000,000 in the aggregate arising out of work performed under this Agreement including, but not limited to, all hazardous materials identified under this Agreement.

2. Asbestos Liability

For sudden and gradual occurrences in the amount no less than \$1,000,000 per claim and \$2,000,000 in the aggregate arising out of work performed under this Agreement.

3. Disposal

*When applicable, the **Contractor** shall designate the disposal site and furnish a Certificate of Insurance from the disposal facility for Environmental Impairment Liability Insurance covering liability for sudden and accidental occurrences in an amount not less than \$1,000,000 per claim and \$2,000,000 in the aggregate and shall include liability for non-sudden occurrences in an amount not less than \$1,000,000 per claim and \$2,000,000 in the aggregate.*

4. Hazardous Waste Transportation

*When applicable, the **Contractor** shall designate the hauler and furnish a Certificate of Insurance from the hauler for Automobile Liability Insurance and Endorsement MCS90 for liability arising out of the transportation of hazardous materials with an amount not less than \$2,000,000 annual aggregate and provide valid EPA identification number.*

5. Certificates of Insurance

Shall clearly state the hazardous materials exposure work being performed under this Agreement.

6. Builder's Risk

When applicable, a special form coverage shall include, but not be limited to:

1. Storage and transport of materials, equipment, supplies of any kind whatsoever to be used on or incidental to this Agreement;

2. Theft coverage;
3. Waiver of Occupancy clause endorsement;
4. Limits of insurance to equal 100% of the insurable completed agreement amount of such additions, or structures, on an agreed amount/replacement cost basis;
5. Maximum deductible clause of \$50,000 each claim.

G. Additional Insured

The City of Sarasota, its elected and appointed officials, employees and agents shall be listed by endorsement as additional insured's, except for worker's compensation and professional liability. Further, other designated persons or entities may be required to be listed as additional insureds.

H. Certification of Insurance

Contractor, prior to providing any services pursuant to this Agreement, shall furnish to the City proof of insurance, including, but not limited to a Certificate of Insurance referencing the City of Sarasota as "additional insured", except for worker's compensation and professional liability, and the effectiveness of all required insurance for Contractor, and each of its subcontractors. The certificates of insurance shall state that the City will be notified in writing at least thirty (30) days prior to cancellation, non-renewal or any other modification of any policies required of Contractor. No work shall commence under this Agreement until the City's authorized representative has given written approval of the insurance certificates. Additionally, Contractor has an affirmative obligation throughout the entire term of this Agreement to provide the City Manager and the Purchasing Department, 1565 First Street, Room 205, Sarasota, Florida 34236 evidence of the continuation of all policies required of Contractor by this Agreement. As such, as each policy of insurance is renewed, proof thereof must be provided in writing to the City Manager and the Purchasing Department, 1565 First Street, Room 205, Sarasota Florida 34236. **All insurance documents must show the Bid Number.** City suggests that Contractor obtain all policies on an occurrence form basis. If, however, Contractor determines to obtain claims-made policies, Contractor shall be required to assure that the policy dates run concurrently throughout the entire term of this Agreement and Contractor shall be required to maintain "tail" coverage Contractor's own expense for a period of time as directed by the City Manager.

19. CONTRACTOR'S RESPONSIBILITY

Until acceptance of the work by the City, it shall be under the charge and care of the contractor and he shall take every necessary precaution against injury or damage to the work by the action of the elements or from any other cause whatsoever, including injury or damage arising from the execution or from the non-execution of the work. The contractor shall rebuild, repair, restore and make good, all injuries to any portion of the work occasioned before its completion and acceptance at no additional expense to the City.

20. LIQUIDATED DAMAGES

The Contractor shall pay to the City the sum of **Three Thousand Dollars (\$3,000.00) per day liquidated damages** for each and every day's delay over and above the number of working days prescribed for completing the work.

21. TERMINATION OF CONTRACT - WITH OR WITHOUT CAUSE

The City of Sarasota reserves the right to terminate any contract, at any time, with or without cause.

22. DEFAULT AND TERMINATION OF CONTRACT

A. The City shall be entitled to terminate this contract in its entirety at any time for the following reasons:

1. If the contractor becomes insolvent, commits any act of bankruptcy, or makes a general assignment for the benefit of creditors; or,
2. If contractor;
 - (i) shall fail to prosecute the work, or any part thereof, with the diligence necessary to insure its progress and completion as prescribed by the time schedule; and,
 - (ii) Shall fail to take such steps to remedy such default within ten (10) days after written notice thereof from City as City shall direct; or,
3. If contractor;
 - (i) Shall commit a default under any of the terms, provisions, conditions, or covenants contained in this contract agreement; and,
 - (ii) Shall fail to take such steps to remedy such default within ten (10) days after written notice thereof from City as City shall direct.

B. If the contract is terminated for causes, City shall have the right, but shall not be obligated to complete the work itself or by others, and to this end, City shall be entitled to take possession of and use such equipment and materials as may be on the job site and to exercise all rights, options, and privileges of contractor under this subcontract, purchase orders or otherwise, and contractor shall promptly assign such rights, options, and privileges to City. If City elects to complete the work itself or by others pursuant to the foregoing sentence, then contractor shall reimburse City for all costs incurred by City in correcting work by contractor, which fails to meet contract requirements.

C. The rights and remedies of City provided in this Section are in addition to any other rights and remedies provided by law or under this agreement.

23. INSPECTION

The City and its authorized representative and agents shall be permitted to inspect the contractor's work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records pertaining to this project.

24. COMPLETION OF WORK

The work shall be commenced within the time stated and shall be completed before the expiration of the number of consecutive calendar days stated in the bid form.

25. PAYMENT FOR WORK

Partial payments for each calendar month will be made to the contractor by the City of Sarasota upon basis of a duly certified approved estimate of the work performed and materials furnished by the contractor during the preceding calendar month. The City of Sarasota will retain no less than ten percent (10%) of the amount of each partial payment until final completion and acceptance of all work covered by this contract. The City may consider reduction of the retainage after eighty percent (80%) of the work has been completed, as approved by the Purchasing Manager. No partial payment shall be construed to be accepted by the City of any portion of the work under this contract. Requests for payment shall be submitted on the forms supplied by the *Public Works Director*. He/She will approve or deny the request for payment within fifteen (15) days of receipt. If denied, he shall state the reasons thereof and indicate what corrective action is needed. Payment shall be due thirty (30) days from the date certified by the *Public Works Director*.

26. CERTIFICATION OF PAYMENT TO SUB-CONTRACTORS

Prior to receipt of any partial payment, the prime contractor shall certify that all sub-contractors having an interest in the contract have received their pro rata share of previous partial payments to the prime contractor for all work completed, and materials furnished in the previous period. This certification shall be in the form designated by the City. The term "sub-contractor", as used herein shall also include persons or firms furnishing materials or equipment for the project, for which partial payment has been made by the City and work done under equipment-rental agreements.

The City shall not make any partial payments after the initial partial payment until the contractor provides said certification, unless the contractor demonstrates good cause for not making any required payment and furnishes written notification of any such good cause to both the City and the affected sub-contractors and suppliers.

Within ten (10) days of any payment by contractor to any M.B.E. sub-contractor, the contractor shall obtain from the M.B.E., an executed sworn M.B.E. payment certification form and submit the form with relevant invoices from the M.B.E. to the *Public Works Director*.

Failure on the part of the M.B.E. sub-contractor to sign the M.B.E. payment certification form and forward the form to the contractor immediately upon receipt of payment shall be grounds to suspend the M.B.E.'s certification.

Within 30 days of receipt of the initial partial payment or any other payments received thereafter except the final payment, the contractor shall pay all sub-contractors and suppliers having an interest in the contract their pro rata shares of the payment for all work completed and materials furnished, unless the contractor demonstrates good cause for not making any said required payment and furnishes written notification of any such good cause to both the City and the affected sub-contractors or suppliers within said 30-day period.

Failure on the part of the contractor to furnish M.B.E. payment forms covering all payments made to M.B.E. sub-contractors, within thirty (30) days after contractor receives final partial payment, will be considered a sufficient grounds for the City Manager to terminate the contract under the provisions of the contract relating to a breach of contract by the contractor.

The successful bidder shall submit prior to contract executions, the name and address of each subcontractor to whom the bidder proposes to subcontract a portion of the work, and shall list each subcontractor, licensed by the State of Florida, proposed by the bidder, to specially fabricate and install any portion of the work. Said list shall include a description of the portion of the work, which will be done by each subcontractor. A form for listing the subcontractors as required is attached and is required to be returned with the bid.

27. FINAL ESTIMATE AND PAYMENT

When the work has been completely performed by the contractor and approved by the *Utilities Director*, the unpaid balance of the contract amount, less any sums that may be deducted or retained under the provisions of this contract, will be paid to the contractor within thirty (30) days of the said date of approval. The contractor shall have furnished to the City a sworn affidavit to the effect that all claims of whatever nature incurred on the work have been paid and that no suits are pending in connection with the work done under this contract, and also providing that the contractor shall include a certificate from the *Utilities Director* stating that the work performed is satisfactory.

28. CHANGES IN WORK

The City may, by field directive, authorize minor variations from the requirements of the contract documents, which do not involve an adjustment in the contract price or the contract time and are consistent with the overall intent of the contract documents. Supplemental agreements, in the form of "change orders" shall be used to clarify the plans and specifications, to provide for unforeseen work or alterations in plans, to change the limits of construction to meet field conditions, to provide a safe and functional connection to an existing facility, to make the project functionally operational in accordance with the intent of the original contract, or to adjust the contract price or the contract time requirements. Any supplemental agreement shall be approved by the delegated City official, contractor and the architect/engineer, if applicable, prior to the commencement of the modified work. Delegated City officials may only approve an adjustment to the contract price that does not exceed 10% of the contract price or \$200,000.00, whichever is less in accordance with Ordinance 03-4440.

29. TERMINATION OF RESPONSIBILITY

This contract will be considered complete when all work has been accomplished, clean up of the premises has been made, the work has been accepted by the *Utilities Director*, and the final payment has been made. Upon date of written final acceptance of work, the City shall be released from all liability whatever growing out of this contract. The contractor will then be released from further obligation except as set forth in Section 31, "Guarantee".

30. WARRANTY OF TITLE

No material, supplies, or equipment for the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The contractor warrants good title to all material, supplies and equipment installed or incorporated in the work and agrees, upon completion of all work, to deliver the premises together with all improvements and appurtenances constructed or placed thereon by him, to the City free from any claims, liens or charges and further agrees that neither he nor any

person, firm or corporation furnishing any materials or labor for any work covered by this contract shall have any right to a lien upon the premises or any improvements or appurtenances thereon, provided that this shall not preclude any contractor from installing metering devices and other equipment of utility companies, the title to which is commonly retained by the utility company. In the event of the installation of any such metering device or equipment, the contractor shall advise the City as to the owner thereof. Nothing contained in this section, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the contractor for their protection of any rights under any law permitting such persons to look to funds due the contractor in the hands of the City. The contractor shall insert the provisions of this section in all subcontracts and material contracts and the contractor shall give notice of its provisions to all persons furnishing materials for the work when no formal contract is entered into for such materials.

31. GUARANTEE

Neither the final certificate of payment nor any provision in the contract documents nor partial or entire use or occupancy of the premises by the City shall constitute an acceptance of work not done in accordance with the contract documents or relieve the contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship. Within thirty (30) days of written notification by the City, the contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of written final acceptance of the work unless a longer period is specified.

32. DIRECT PURCHASE

The City reserves the right, at the City's option, to direct purchase materials, equipment, and furnishings involved in the project, including subcontracts, if any. The selected contractor, and all subcontractors, if any, shall comply with the City's direct purchase procedures, including but not limited to those listed below.

Within 15 days of the posted date of the Notice of Bid Action, the selected contractor shall submit a list of potential direct purchase items for the City's consideration. The intent is for single items or large quantities of single items of approximately \$5,000.00 or more to be considered for direct purchases. The parties acknowledge that City may be directly purchasing some of the material and/or equipment necessary for the project so as to save the sales tax which would otherwise have been due with regard to same.

Along with the list, the contractor shall also include the price quotes from the suppliers from the bid, including any terms and conditions negotiated with the suppliers. The contractor is responsible for selecting the supplier, specifications, material receipt, inspecting shipments and assuring that the material is in accordance with the specifications. In the event the City determines to make any direct purchase of material and/or equipment for the Project, the direct purchase will be authorized by a deductive change to the agreement. The deductive change for the direct purchase shall reduce the contract amount otherwise due from the City to the Contractor by the cost to be paid by the City for the material and/or equipment to be directly purchased by the City and by the sales tax saved by the City directly purchasing the material and/or equipment. The contractor retains all responsibility for an acceptable finished product and is responsible for maintaining the project schedule. The City's Direct Purchase mechanism to

effectuate tax savings in no way effects the obligation of the contractor to meet all of the terms and conditions and all provisions and technical specifications of the bid and resultant contract document. The Contractor shall be responsible for insuring all materials and items in his care, custody and control regardless of whether directly purchased by the City or not. The materials directly purchased by the City for inclusion into the project are subject to the same terms and conditions as any and all other items of the contract.

The Direct Purchase items selected, and upon request of an order by the contractor, the Purchasing Department will issue a direct purchase order to the contractor's or subcontractor's source at the price proposed in the subcontractor's or contractor's bid, less sales tax. The City reserves the option to issue the direct purchase orders to the City's annual contract vendors or State contract vendors for comparable or lower prices, but will subtract from the contract the price shown on the subcontractor's or contractor's bid. For construction management projects, items for direct purchase will be identified by or before the construction documents phase.

It will be the contractor's sole and complete responsibility to properly expedite and follow up on direct purchase orders, thereby assuring delivery of the item as ordered and at the time and place needed by the Contractor.

The Contractor shall take delivery, unload, store and install the materials and equipment purchased on the direct purchase order in accordance with the bid, protect and maintain in proper condition; and work with the supplier to repair, replace, and make good any defect without cost to the City, until such time as the scope of work by the contractor has been completed and accepted by the City. The contractor will be responsible for undertaking and completing any returns of direct purchase materials or equipment, and working with the supplier to effectuate any warranties for defective materials or equipment, or resolving any problems related to the direct purchase materials and equipment. The contractor will coordinate corrective action. Any returns not replaced shall be credited to the City and acknowledged by a supplement to the direct purchase order and amendment to the contractor's application for payment. The Contractor shall not be responsible for warranting the materials and equipment to the City, however, the contractor shall be responsible for maintaining the supplier's warranty of the material or equipment purchased by direct purchase order by the City. The contractor shall maintain records of all direct purchases received and incorporated into the work and provide the City with a monthly accounting.

When delivery of a direct purchase order is complete, or a payment is to be made on a partial shipment, the contractor will immediately submit to the City the invoice and documentation supporting the goods received. Invoices for direct purchase orders will be sent by the direct purchase vendor to the Contractor. The Contractor will verify delivery and sign the invoice and associated documentation supporting the amount of the payment. Payment will be made by check mailed to the direct purchase vendor as of the next available check run of the City. The contractor will assist the City in assuring prompt payment by supplying the supplier's FEI numbers, addresses, phone numbers, etc.

33. Environmentally Preferable Products

The City of Sarasota is committed to the procurement of products and services that minimize N negative environmental and social impacts and emphasize long-term values. Preference shall be

given to products and services that have a lesser or reduced effect on human health and the environment when compared to other products and services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.



CERTIFICATION FOR DISBURSEMENT OF PREVIOUS PARTIAL PAYMENTS TO SUB-CONTRACTORS

Date: _____

To Release Monthly Payment for _____, Prime Contractor for **Bid # 11-19W Class I Deep Injection Well System**, hereby certifies that all Sub-Contractors having an interest in this Contract have received their pro rata share of all previous partial payments made by the City of Sarasota for all work completed and materials and equipment furnished under the Contract. The term "Sub-Contractor", as used herein, shall also include persons or firms furnishing materials or equipment incorporated into the work or stockpiled in the vicinity of the Project which partial payment has been made by the City and work done under equipment-rental agreements.

Contractor

By: _____

Attested by: _____

Title

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____ by _____ (*name and title of corporate officer*) of _____, a _____ (*state or place of incorporation*) corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ (*type of identification*) as identification.

(*signature line for notary public*)

(*name of notary typed, printed or stamped*)

(*title or rank*)

(*serial number, if any*)

Instructions:

1. Submit this Certification to the *Director of Utilities* within ten (10) days after receipt of payment.
2. A separate Certification is required **for each Contract**.
3. To avoid possible delay in payment, certification must be submitted with each request for partial payment after the initial partial payment has been made.
4. In case of a corporation, the certification should be signed by a President or Vice President or if signed by any other individual, the Contractor shall also submit a corporate resolution authorizing that individual to bind the corporation or some other acceptable document certifying that individuals delegated authority.
5. The certification must be attested to by either a notary public or an appropriate corporate officer.



CERTIFICATION FOR PAYMENT TO MINORITY BUSINESS ENTERPRISE

This is to certify that _____
(M.B.E. Contractor) received (monthly) or (final) partial payment of \$ _____ on
_____ 2 _____ from _____ Prime Contractor for **Bid # 11-19W.**

Signed by Official of Prime Contractor: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____
by _____ (name and title of corporate officer) of
_____, a _____ (state or place of
incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced
_____ (type of identification) as identification.

(signature line for notary public)

(name of notary typed, printed, or stamped)

(title or rank)

(serial number, if any)

.....
Total Paid this Month \$ _____
Total Previously Paid \$ _____
Total Paid to Date \$ _____

Signed by Official of M.B.E. Contractor: _____

STATE OF _____
COUNTY OF _____

(Title)

The foregoing instrument was acknowledged before me this _____ day of _____
by _____ (name and title of corporate officer) of
_____ (name of corporation), a _____ (state or
place of corporation) corporation, on behalf of the corporation. He/she is personally known to me or has
produced _____ (type of identification) as identification.

Signature line for notary public _____
Name of notary typed, printed, or stamped _____
Title or rank _____
Serial number if any _____

Due: By the 10th of each month after M.B.E. starts work whether payment is made or not.

Distribution: Original and 1 copy – *Utilities Department Director*

Note: M.B.E.'s failure to provide this form to the Prime Contractor upon receipt of payment is grounds to suspend the M.B.E.'s certification. Non-compliance by the Prime Contractor to provide the City with this information will be considered as sufficient grounds for the City Manager to terminate the contract.

Total of all Progress Payments \$ _____

Retainage Withheld - \$ _____

Bond Withheld - \$ _____

Amount of Utilization Schedule - \$ _____

Overrun (+) - \$ _____

(*) Under-run (-) - \$ _____

(*) Includes comments explaining all under-runs.

CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT, made and entered into this _____ day of _____, 2011, by and between the City of Sarasota, Florida, a municipal corporation, herein after referred to as City, and _____, a Florida Corporation, with its principal place of business at _____ hereinafter referred to as the Contractor, in the manner following:

WITNESSETH, that for in consideration of the mutual covenants herein contained, running from each of the parties to the other, the parties hereto have agreed as follows:

1. The Contractor hereby expressly covenants and agrees to furnish all necessary labor, materials, equipment, tools, consumables, transportation and incidentals required for **ITB 11-19W Class I Deep Injection Well System Project**, in accordance with the General Provisions, Technical Specifications, and Special Provisions attached hereto and made a part hereof, and in accordance with the Contractor's proposal submitted in connection herewith.
2. The City agrees to pay unto the Contractor after all the above specified work has been fully completed and finally inspected and accepted by the City, and Contractor's statement under oath to the effect that all labor and material suppliers have been paid in full has been furnished, the total contract price of \$ _____, for the complete performance of all covenants made above by the Contractor, subject to additions and deductions by change orders as provided in the Contract Documents.

IN WITNESS WHEREOF, the parties hereunto set their hands and seals on the day and year first above written.

Signed, sealed and delivered
in the presence of:

CITY OF SARASOTA

CITY MAYOR

ATTEST:

CITY AUDITOR AND CLERK / IF APPLICABLE

WITNESSES AS TO CONTRACTOR:

CONTRACTOR:

BY: _____

TITLE: _____

APPROVED AS TO FORM AND CORRECTNESS:

CITY ATTORNEY

CONTRACTOR'S FINAL AFFIDAVIT AND RELEASE OF LIEN

Bid # 11-19W Class I Deep Injection Well System

STATE OF _____}

COUNTY OF _____}

BEFORE ME the undersigned authority personally appeared _____ who after being by me first sworn, deposes and says that:

1. He/she is _____ of _____.
(Title of Officer) doing business in the State of Florida, hereinafter called Contractor.
2. Contractor pursuant to Contract dated _____, 2_____, hereinafter referred to as Contract, with the City of Sarasota, Florida, hereinafter referred to as City, has heretofore furnished or caused to be furnished labor, material and services for the construction of certain improvements as more particularly set forth in said Contract.
3. Contractor represents that all work to be performed under the aforesaid Contract has been fully completed and that all persons and firms who furnished material, labor, and/or services incident to the completion of said work have been paid in full except to the following:

NAME

ADDRESS

AMOUNT DUE

(Write "None" if all persons and firms have been paid in full)

4. The undersigned affiant for and in consideration of final payment to him/her in the amount of \$_____, and all other previous payments paid by City to Contractor, does hereby for and in behalf of the Contractor, waive, release, remise and relinquish the Contractor's right to claim, demand or impose a lien or liens for work done or materials and/or services furnished or any other class of lien whatsoever, on any of the premises owned by City on which improvements have been completed in connection with the aforementioned Contract.
5. The affiant herein does hereby represent that he/she has authority to execute a full and final Release of Lien for and in behalf of the Contractor as set forth above.
6. The affiant herein makes this Affidavit and Release of Lien for the express purpose of inducing City to make final disbursement and payment to the Contractor in the amount of \$_____.

Project Name: ITB 11-19W Class I Deep Injection Well System

7. This Affidavit and Release of Lien is made by affiant with full knowledge of the applicable laws of the State of Florida. In addition to such rights as may be afforded to City under said applicable laws, affiant expressly agrees to indemnify and save City harmless from any and all actual costs and expenses, including reasonable attorney's fees, arising out of claims by laborers, subcontractors or material men who might claim that they have not been paid for services or material furnished by or through the Contractor in connection with the work performed under the aforementioned Contract.

(Corporate Seal)

Name of Corporation

ATTEST:

By _____
Affidavit

Title: _____

STATE OF _____ }
COUNTY OF _____ }

The foregoing instrument was acknowledged before me this ____ day of _____ by _____ (name and title of corporate officer) of _____ a _____ (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ (type of identification) as identification.

Signature line for notary public _____

Name of notary typed, printed, or stamped _____

Title or rank _____

Serial number if any _____

My Commission Expires: _____

PERFORMANCE AND PAYMENT BOND
PUBLIC CONSTRUCTION BOND

Page 1 of 2

By this bond, we _____, as Principal and _____, as Surety, are bound to the City of Sarasota, herein called Owner, in the sum of \$_____, for payment of which we ourselves, our heirs, personal representatives, successors, and assigns jointly and severally are liable

THE CONDITION OF THIS BOND IS that is Principal:

1. Performs this contract dated _____, 2_____, between Principal and Owner for the **Class I Deep Injection Well Project, Bid #11-19W**, the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract, and;
2. Promptly makes payments to all claimants, as defined in Section 255.05 (1) Florida Statutes, supplying Principal with labor, materials or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract, and;
3. Pays Owner all loss, damages, expenses, costs, and attorney's fees, including appellate proceedings that Owner sustains because of a default by Principal under this contract, and;
4. Performs the guarantee of work and materials furnished under this contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

Any changes in or under the contract documents and compliance or non-compliance with any formalities connected with the contract or the changes do not affect Surety's obligation under this bond.

_____ DATED THIS _____ DAY
Principal OF _____, 2_____
By: _____
Title
Address: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____ by _____ (name and title of corporate officer) of _____ (name of corporation), a _____ (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ (type of identification) as identification.

Signature line for notary public _____

Name of notary typed, printed, or stamped _____

Title or rank _____

Serial number if any _____

My Commission Expires: _____

DAY

DATED THIS _____

OF _____, 2____

Surety

By: _____
Attorney-in-Fact for Surety

Address: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____ by _____ (*name and title of corporate officer*) of _____ (*name of corporation*), a _____ (*state or place of incorporation*) corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ (*type of identification*) as identification.

Signature line for notary public _____

Name of notary typed, printed, or stamped _____

Title or rank _____

Serial number if any _____

My Commission Expires: _____

Contractor is required to execute and deliver the original copy of this bond to the City of Sarasota and is required to record a copy of the bond in the Public Records of Sarasota County.

CITY OF SARASOTA
Class I Deep Injection Well System
Bid #

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ATTACHMENT A. FDEP Well Construction Permit

TECHNICAL SPECIFICATIONS

DIVISION 1: GENERAL REQUIREMENTS

DIVISION 2: SITE WORK

SECTION 00500
GENERAL REQUIREMENTS

1.0 GENERAL

1.01 PROJECT DESCRIPTION

- A. The principal purpose of this project is to retain a qualified water well CONTRACTOR capable of providing all services associated with constructing one Class I deep injection well, one Upper Zone Monitor Well, one Lower Zone Monitor Well, and four pad monitor wells at the City of Sarasota Waste Water Treatment Plant in Sarasota Florida. The deep injection well is expected to be drilled to a total depth of approximately 1,700 feet below land surface, with approximately 1,100 feet of 28-inch final steel casing and 1,080 feet of sixteen and six-tenths (16.6) inch inner diameter fiberglass reinforced tubing and a positive seal packer system.
- B. The CONTRACTOR performing work covered by this contract shall be licensed by Sarasota County to perform well work within the county, if required. The work covered by these specifications includes the furnishing of all materials; labor, equipment, per diem and performing all operations in connection with the services as specified and shown on the drawings, complete.
- C. Specifications included in these bid documents establish the performance, quality requirements, location and general arrangement of materials and equipment, and establish the minimum standards for quality of workmanship and appearance.
- D. All well construction services will be performed by a State of Florida licensed water well CONTRACTOR able to demonstrate meeting all applicable standards set by the Florida Department of Environmental Protection (FDEP), Southwest Florida Water Management District (SWFWMD), Sarasota County Public Health Department (SCPHD), and American Water Works Association (AWWA).
- E. The drilling CONTRACTOR will be responsible for securing and providing the OWNER or OWNER'S representatives, proof of all secured permits and operating licenses as required by state and local agencies for the assigned work. No work will begin until all such permits are obtained and presented.
- F. All well construction activities will be initiated 24 hours per day and 7 days per week or as approved by the ENGINEER. The OWNER, ENGINEER, and the regulatory agencies must be given 24 hours notice prior to any work activities.

2.0 PRODUCTS

2.01 EQUIPMENT AND PERSONNEL

- A. The CONTRACTOR will provide capable personnel and equipment to conduct the work as authorized. The work shall be performed with the equipment, which is adequate to perform all phases of the work. The CONTRACTOR shall submit information on the equipment to be used in this project as requested by the City.
- B. If in the opinion of the ENGINEER, the CONTRACTOR'S equipment is not capable of satisfactorily performing the work described in these specifications, the CONTRACTOR shall substitute equipment satisfactory to the ENGINEER.
- C. The CONTRACTOR shall provide the services of experienced drillers and competent helpers.
- D. The CONTRACTOR shall coordinate with the ENGINEER and OWNER so that the project is completed in a timely manner.

3.0 EXECUTION

- A. The CONTRACTOR shall furnish three high quality field copies of the various geophysical logs and two copies of the video survey to the ENGINEERS immediately following logging operations. The CONTRACTOR shall deliver ten final copies prepared by the logging company to the ENGINEER prior to completion of the work.
- B. The CONTRACTOR shall keep a daily activity log once the work is started and until completed. The daily log will describe the nature of conditions encountered, the work done during each day, items of work accomplished, materials used during each day, the water level in the well at the beginning and end of each shift, and other pertinent data as required by the ENGINEER. The County will utilize this information to prepare reports to the appropriate regulatory agencies if required.
- C. After well construction activities have been completed, the well shall be thoroughly cleaned of all foreign substances, including tools, timbers, rope, debris of any kind, cement, oil, grease, joint dope and scum.
- D. The CONTRACTOR shall at all times keep the premises free from accumulations of waste materials caused by his employees or work and shall clean up as often as necessary and as directed by the ENGINEER. After the well testing has been completed, the site shall be cleaned up; any ditches dug should be filled in; any ditches filled shall be returned to normal; all peripheral materials and any other imported substances shall be removed; and the site returned to its original condition.
- E. The CONTRACTOR shall take precautions as necessary, or as required, to permanently prevent contaminated water or water having undesirable physical, bacteriological, or chemical characteristics from entering through the opening made by the CONTRACTOR in the stratum where a drinking water source exists. He shall take all necessary precautions during the testing period to prevent contaminated water, gasoline, etc. from

GENERAL REQUIREMENTS

entering any wells either through the opening or by seepage through the ground surface.

- F. At all times during the progress of the work, the CONTRACTOR shall protect the wells to effectively prevent either accidental or willing tampering with the wells or the entrance of foreign matter into and, upon completion, of the wells, he shall provide and set substantial caps satisfactory to the ENGINEER.

4.0 PAYMENT (NOT USED)

END OF SECTION

SECTION 01010
SUMMARY OF WORK

1.0 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. This Contract comprises the construction of a Class I Deep Injection Well, Upper Zone Monitor Well, Lower Zone Monitor Well, and shallow pad monitor wells as shown on the Drawings and specified herein. The work consists of furnishing all labor, equipment and materials for the construction of the improvements which include, but are not limited to all well drilling equipment, testing, monitor systems, piping, flowmeters, valves, electrical and instrumentation.
- B. The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- C. The Contractor shall perform the work complete, in place and ready for continuous service, and shall include repairs, testing, permits, cleanup and legal disposal of materials, replacements, and restoration required as a result of damages caused during this construction.
- D. The Contractor shall furnish and install all materials, equipment, and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.
- E. The Contractor shall comply with all Municipal, County, State, Federal Laws and other codes and regulations applicable to the above construction work. The Contractor shall comply with all provisions in the attached Florida Department of Environmental Protection (FDEP) Well Construction Permit.

1.02 CONTRACTOR'S USE OF PREMISES

- A. The Contractor shall assume full responsibility for the protection and safekeeping of products and materials stored at the job site. If additional storage or work areas are required, they shall be obtained by the Contractor at no additional cost to the Owner.

1.03 WORK SEQUENCE

- A. The Contractor shall establish his work sequence based on the use of crews to facilitate completion of construction, including testing, within the allotted contract time. In addition, the Contractor shall schedule his work sequence in accordance with any other Sections of the Specifications which include special sequencing. The shallow pad monitor wells will be

drilled first, followed by the Deep Injection Well, the Lower Zone Monitor Well, and the Upper Zone Monitor Well.

END OF SECTION

SECTION 01026

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall receive and accept the compensation per quantity provided in the Proposal and the Contract as full payment for furnishing all materials, labor, tools and equipment, for performing all operations necessary to complete the work under the Contract, and also in full payment for all loss or damages arising from the nature of the work, or from the action of the elements or from any unforeseen difficulties which may be encountered during the execution of the work until the final acceptance by the OWNER.
- B. The prices stated in the Proposal include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Drawings and as specified herein. The basis of payment for an item at the price shown in the Proposal shall be in accordance with the description of that item in this Section.
- C. Should the CONTRACTOR feel that the cost for any item of work has not been established by the Bid Form or payment items, he shall include the cost for that work in some other applicable bid item, so that his Proposal for the project does reflect his total price for completing the work in its entirety.

1.02 MEASUREMENT

- A. The quantities for payment under lump sum items in this Contract will be in accordance with the CONTRACTOR's bid price.
- B. The quantities for payment under unit price items in this Contract will be determined by actual measurement of the completed items in place or performed, ready for service and accepted by the OWNER.

1.03 PAYMENT ITEMS

PART A. SHALLOW MONITOR WELLS

Item No. A1: Initial Mobilization to Site and Site Prep - Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for mobilizing all necessary equipment and personnel to the site, site preparation, and drilling set up for shallow monitor well installation.

Item No. A2: Demobilization from last site and cleanup after completion of drilling-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for demobilizing from the last shallow monitor well site and cleanup of all shallow monitor well sites.

Item No. A3: Drilling Four 8-inch Diameter Holes to a Depth of 15 Feet-Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for drilling four 8-inch diameter holes to a depth of approximately 15 feet.

Item No. A4: Furnish and Install Four 2-Inch Diameter PVC Casings and Well Screens - Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for all equipment, materials, and personnel necessary to furnish and install four 2-inch diameter PVC well casings (7 feet each) and well screens (10 feet each).

Item No. A5: Gravel pack the screens, install a bentonite seal, and cement the 2-inch diameter casings to depths of +/- 15 feet bls in accordance with the Specifications and Drawings- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for furnishing and installing the gravel pack for each well screen, a bentonite seal above the gravel, and cement to surface.

Item No. A6: Supply install and operate temporary pumping equipment capable of producing up to 25 gpm for not less than two hours at each of the four wells – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for the development of each shallow monitor well for 2 hours each.

Item No. A7: Install protective poles for each monitor well in accordance with the Specifications – Total Bid

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Payment will be made at the Contract unit price for the item, which shall be full compensation for furnishing and installing four protective poles for each shallow monitor well.

Item No. A8: Cap and Provide Locking Devices with Padlocks for Each of the Monitor Wells- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for furnishing and installing caps and locks for the four monitor wells.

Item No. A9: Standby Time Required by the Owner and/or Engineer- Total Bid

Payment for Stand-By time (as directed and approved by the ENGINEER) will be made at the unit hour price and measured to the nearest half-hour.

PART B. TEST INJECTION WELL

Item No. B1: Initial Mobilization to Site and Site Prep - Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for attending project meetings, mobilizing all necessary equipment and personnel to the site, site preparation, installation of a temporary drilling pad, drilling set up, and installation of surface casing and/or an optional pit casing.

Item No. B2: Demobilization from Site After Completion of Well- Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for the removal of all equipment, material and personnel from the site and restoring the site to original conditions or as approved by the ENGINEER

Item No. B3: Drilling Nominal 12-inch Diameter Pilot Hole to +/- 300 feet bls by Mud Rotary- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for drilling the hole to the specified diameter including the performance of drift indicator surveys as required. Drilled hole shall be measured in linear feet from the top of land surface to the total depth of the successfully drilled hole.

Item No. B4: Reaming Nominal 54-inch Diameter Hole to +/- 300 feet bls by Mud Rotary- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for drilling the hole to the specified diameter including the performance of

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drift indicator surveys as required. Drilled hole shall be measured in linear feet from the top of land surface to the total depth of the successfully drilled hole.

Item No. B5: Furnishing, Installing, and Cementing the 48-inch Surface Casing to Depth of +/- 300 feet- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. B6: Drilling one 12-inch diameter pilot hole by reverse-air rotary to a depth of +/- 1000 feet bls, conduct inclination surveys-Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for all equipment, materials, and personnel necessary to drill a pilot hole as specified including performance of drift indicator surveys and air-lift specific capacity testing as required. Drilling shall be measured in linear feet of pilot holed successfully drilled pilot hole to the total depth.

Item No. B7: Back-plug 12-inch pilot hole with cement from 1000 feet bls to 300 feet bls-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for back-plugging the pilot hole with cement to the specified depth.

Item No. B8: Ream one 47-inch diameter hole to +/- 1000 feet bls using reverse-air rotary- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. B9: Furnishing, Installing, and Cementing the 40-inch Intermediate Casing to a depth of +/- 1000 feet- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as

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specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. B10: Drilling one 12-inch diameter pilot hole by reverse-air rotary from +/- 1000 feet bls to a depth of +/- 1700 feet bls, conduct inclination surveys- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for all equipment, materials, and personnel necessary to drill a pilot hole as specified including performance of drift indicator surveys and air-lift specific capacity testing as required. Drilling shall be measured in linear feet of pilot holed successfully drilled pilot hole to the total depth.

Item No. B11: Back-plug 12-inch pilot hole with cement from 1700 feet bls to 1100 feet bls- Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for back-plugging the pilot hole with cement to the specified depth.

Item No. B12: Ream one 39-inch diameter hole from +/- 1000 feet bls to +/- 1110 feet bls using reverse-air rotary- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. B13: Gravel fill for the 12-inch pilot hole and cement to facilitate 28-inch diameter casing installation- Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing gravel backfill and cement to the reamed hole of the test well to facilitate casing installation.

Item No. B14: Furnishing, Installing, and Cementing the 28-inch diameter final casing to a depth of +/- 1500 feet bls- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

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Item No. B15: Filling Cavernous Zones with Gravel If Required- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing gravel to fill cavernous zones, if required.

Item No. B16: Cementing with gelling additives due to unknown geological faults- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for cementing with gelling additives, if required.

Item No. B17: Installing and removing temporary flow control devices, if needed-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing flow control devices, if needed.

Item No. B18: Furnish and Install Drillable Bridge Plug in 12-inch Pilot Hole – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing a drillable bridge plug.

Item No. B19: Reaming one 27-inch diameter hole from +/- 1100 feet bls to a depth of 1700 feet bls by reverse air- Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. B20: Water sampling using a packer in accordance with the specifications in addition to air-reverse water quality sampling – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for water sampling using a packer.

Item No. B21: Furnish and install 18-inch diameter FRP tubing and packer assembly to a depth of 1080 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing the 18-inch FRP tubing and packer assembly.

Item No. B22: Supply, install and operate equipment capable of conducting a pressure test on the final 28-inch well casing while plugged at the bottom at a minimum pressure of 150 psi and a maximum pressure of 200 psi for not less than 1 hour – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing casing pressure test services and including but not limited to: providing packers, piping and valves, pressure readout meters, and conducting the test.

Item No. B23: Supply, install and operate equipment capable of conducting a pressure test on the annulus between the final 28-inch well casing and the 18-inch tubing at a minimum pressure of 150 psi and a maximum pressure of 200 psi for not less than 1 hour – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing annulus pressure test services and including but not limited to: providing piping and valves, pressure readout meters, and conducting the test.

Item No. B24: Supply, install and operate pumping equipment to produce 300 gallons per minute for 2 hours at a time for up to 24 hours at the test well for packer tests-Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for operating pumping equipment during packer tests.

Item No. B25: Supply, install and remove pressure transducer and readout unit as required by the Specifications-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing a pressure transducer, installing the transducer in the well, collecting and downloading water level data before, during and after the packer tests, and removing the transducer from the well.

Item No. B26: Collect, label, and preserve the 10-foot geologic cores from the test well in accordance with the Specifications-Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for collection of the rock core during air reverse drilling of the pilot holes. Recovery of less than 50 percent of cored material with a minimum of two intact core pieces of at least 12-inches in length or as approved by the Engineer during a single coring event will be considered an unsuccessful core and the Contractor will not receive compensation.

Item No. B27: Analyze cores in laboratory in accordance with the Specifications (Complete Analysis) – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for the shipment of core samples to laboratory, and laboratory analysis as specified. Contractor shall submit two samples from each core, except the storage zone core) to the Contractor's selected laboratory.

Item No. B28: Geophysical logging, including radioactive tracer survey, TV surveying, and water sample collection on test well in accordance with the specifications complete— Total Bid

Payment will be made at the Contract lump sum for the item, which shall be full compensation for providing all geophysical logging and video surveying services including, but not limited to, all materials, equipment, labor, structural work, mechanical work, testing, interpretation services, and all other incidentals required to complete the work as specified, including the furnishing of four field copies and 20 final copies of all geophysical logs successfully completed.

Item No. B29: Water sample during drilling and testing by approved laboratory in accordance with the Specifications – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing sampling bottles, collection of the sample, conveyance and submittal of the samples to the Contractors approved laboratory. Laboratory analytical services are also included in the unit prices specified herein.

Item No. B30: Full analysis of water sample collected prior to cessation of development phase in accordance with the specifications (all parameters in list) – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing sampling bottles, purging the well, collection of the samples, conveyance and submittal of the samples to the Contractors approved laboratory. Laboratory analytical services are also included in the price specified herein.

Item No. B31: Furnish and install wellhead fittings on test well, including all gauges, pressure transducers, and fittings as shown in the drawings, including tubing hanger

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assembly and painting-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing wellhead completion in accordance with the drawings.

Item No. B32: Disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water.

Item No. B33: Conduct injection test with reclaimed water at a rate of 9,722 gpm (14 MGD) for a period of 12 hours followed by a 24 hour shut in period-Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for conducting a 12 hour injection test using reclaimed water at a rate of 14 MGD with a 24 hour shut in period after the test.

Item No. B34: Standby Time required by the Owner and/or the Engineer-Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing Standby Time up to 12 hours per day in accordance with the specifications.

PART C. LOWER ZONE MONITOR WELL

Item No. C1: Initial Mobilization to Site and Site Prep - Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for mobilizing all necessary equipment and personnel to the site, site preparation, drilling set up, and installation of surface casing and/or an optional pit casing.

Item No. C2: Demobilization from Site After Completion of Well- Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for the removal of all equipment, material and personnel from the site and restoring the site to original conditions or as approved by the ENGINEER

Item No. C3: Drilling nominal 10-inch diameter pilot hole to +/- 300 feet bls by mud rotary – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for drilling the hole to the specified diameter including the performance of

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drift indicator surveys as required. Drilled hole shall be measured in linear feet from the top of land surface to the total depth of the successfully drilled hole.

Item No. C4: Ream nominal 22-inch diameter hole by mud rotary to +/- 300 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. C5: Furnishing, installing and cementing the 16-inch steel casing to a depth of +/- 300 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. C6: Drill nominal 10-inch diameter pilot hole by reverse air rotary to +/- 950 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for all equipment, materials, and personnel necessary to drill a pilot hole as specified including performance of drift indicator surveys as required. Drilling shall be measured in linear feet of pilot holed successfully drilled pilot hole to the total depth.

Item No. C7: Conduct single packer test and water quality sampling at depth of +/- 900 feet to determine casing setting depth – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for water sampling using a packer.

Item No. C8: Ream pilot hole to nominal 16-inch diameter to +/- 900 feet bls – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. C9: Furnish, install, and cement in place the 6-inch diameter FRP casing to +/- 900 feet bls – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. C10: Clean pilot hole to total depth of +/- 950 feet bls using a 6-inch diameter bit – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for cleaning out the monitor zone from the bottom of the casing to total well depth.

Item No. C11: Conduct all geophysical logging and TV surveying for the Lower Zone Monitor Well in accordance with the specifications, complete – Total Bid.

Payment will be made at the Contract lump sum for the item, which shall be full compensation for providing all geophysical logging and video surveying services including, but not limited to, all materials, equipment, labor, structural work, mechanical work, testing, interpretation services, and all other incidentals required to complete the work as specified, including the furnishing of four field copies and 20 final copies of all geophysical logs successfully completed.

Item No. C12: Conduct water sampling during drilling and testing by approved laboratory in accordance with the specifications during reverse-air drilling – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing sampling bottles, collection of the sample, conveyance and submittal of the samples to the Contractor's approved laboratory. Laboratory analytical services are also included in the unit prices specified herein.

Item No. C13: Full analysis of water sample collected prior to cessation of development phase in accordance with the specifications (all parameters in list) – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing sampling bottles, purging the well, collection of the samples, conveyance and submittal of the samples to the Contractor's approved laboratory. Laboratory analytical services are also included in the price specified herein.

Item No. C14: Supply, install and operate equipment capable of conducting a pressure test on the final 6-inch well casing while plugged at the bottom at a minimum pressure of 150 psi and a maximum pressure of 200 psi for not less than 1 hour – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing casing pressure test services and including but not limited to: providing packers, piping and valves, pressure readout meters, and conducting the test.

Item No. C15: Supply, install and operate pumping equipment to produce 300 gallons per minute for 2 hours for up to 24 hours – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for operating pumping equipment.

Item No. C16: Supply sufficient tanker truck capacity to carry excess fluids resulting from 24-hour development, away from site for disposal for the lower zone monitor well – Total Bid.

Payment will be made at the Contract lump sum price for providing a tanker truck, collecting development fluids and disposing of fluids.

Item No. C17: Supply, install and remove pressure transducer and readout unit as required by the specifications for injection testing. – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing a pressure transducer, installing the transducer in the well, collecting and downloading water level data before, during and after the injection test, and removing the transducer from the well.

Item No. C18: Installing and removing temporary flow control devices, if needed – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing flow control devices, if needed.

Item No. C19: Disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water.

Item No. C20: Furnishing and installing final well head fittings on monitor well complete – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing wellhead completion in accordance with the drawings.

Item C21: Standby time required by the Owner and/or the Engineer – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing Standby Time up to 12 hours per day in accordance with the specifications.

PART D. UPPER ZONE MONITOR WELL

Item No. D1: Initial Mobilization to Site and Site Prep - Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for mobilizing all necessary equipment and personnel to the site, site preparation, drilling set up, and installation of surface casing and/or an optional pit casing.

Item No. D2: Demobilization from Site After Completion of Well- Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for the removal of all equipment, material and personnel from the site and restoring the site to original conditions or as approved by the ENGINEER

Item No. D3: Drilling nominal 10-inch diameter pilot hole to +/- 300 feet bls by mud rotary – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for drilling the hole to the specified diameter including the performance of drift indicator surveys as required. Drilled hole shall be measured in linear feet from the top of land surface to the total depth of the successfully drilled hole.

Item No. D4: Ream nominal 22-inch diameter hole by mud rotary to +/- 300 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Measurement and Payment

01026-13

Item No. D5: Furnishing, installing and cementing the 16-inch steel casing to a depth of +/- 300 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. D6: Drill nominal 10-inch diameter pilot hole by reverse air rotary to +/- 850 feet bls – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation for all equipment, materials, and personnel necessary to drill a pilot hole as specified including performance of drift indicator surveys as required. Drilling shall be measured in linear feet of pilot holed successfully drilled pilot hole to the total depth.

Item No. D7: Conduct single packer/straddle packer tests and water quality sampling at depth of +/- 800 feet and conduct specific capacity and water quality tests to verify monitor zone is above the USDW – Total Bid

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for water sampling and specific capacity testing using a packer.

Item No. D8: Ream pilot hole to nominal 16-inch diameter to +/- 800 feet bls – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for reaming the pilot hole to the specified diameter including the performance of drift indicator surveys as required. Reamed hole shall be measured in linear feet from the top of the reamed portion to the total depth of the successfully reamed hole.

Item No. D9: Furnish, install, and cement in place the 6-inch diameter FRP casing to +/- 800 feet bls – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing, installing, and cementing casing, including but not limited to, all materials, equipment, fittings, centralizers, cement, labor, structural work, mechanical work, testing, and all other incidentals required to complete the work as specified. Measurement will be in linear feet from land surface to the total depth of the casing successfully installed.

Item No. D10: Clean pilot hole to total depth of +/- 850 feet bls using a 6-inch diameter bit – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for cleaning out the monitor zone from the bottom of the casing to total well depth.

Item No. D11: Conduct all geophysical logging and TV surveying for the Upper Zone Monitor Well in accordance with the specifications, complete – Total Bid.

Payment will be made at the Contract lump sum for the item, which shall be full compensation for providing all geophysical logging and video surveying services including, but not limited to, all materials, equipment, labor, structural work, mechanical work, testing, interpretation services, and all other incidentals required to complete the work as specified, including the furnishing of four field copies and 20 final copies of all geophysical logs successfully completed.

Item No. D12: Conduct water sampling during drilling and testing by approved laboratory in accordance with the specifications during reverse-air drilling – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing sampling bottles, collection of the sample, conveyance and submittal of the samples to the Contractor's approved laboratory. Laboratory analytical services are also included in the unit prices specified herein.

Item No. D13: Full analysis of water sample collected prior to cessation of development phase in accordance with the specifications (all parameters in list) – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing sampling bottles, purging the well, collection of the samples, conveyance and submittal of the samples to the Contractor's approved laboratory. Laboratory analytical services are also included in the price specified herein.

Item No. D14: Supply, install and operate equipment capable of conducting a pressure test on the final 6-inch well casing while plugged at the bottom at a minimum pressure of 150 psi and a maximum pressure of 200 psi for not less than 1 hour – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing casing pressure test services and including but not limited to: providing packers, piping and valves, pressure readout meters, and conducting the test.

Item No. D15: Supply, install and operate pumping equipment to produce 300 gallons per minute for 2 hours for up to 24 hours – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for operating pumping equipment.

Item No. D16: Supply sufficient tanker truck capacity to carry excess fluids resulting from 24-hour development, away from site for disposal for the lower zone monitor well – Total Bid.

Payment will be made at the Contract lump sum price for providing a tanker truck, collecting development fluids and disposing of fluids.

Item No. D17: Supply, install and remove pressure transducer and readout unit as required by the specifications for injection testing. – Total Bid

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing a pressure transducer, installing the transducer in the well, collecting and downloading water level data before, during and after the injection test, and removing the transducer from the well.

Item No. D18: Installing and removing temporary flow control devices, if needed – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation, including but not limited to, all materials, equipment, and labor necessary for installing flow control devices, if needed.

Item No. D19: Disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing disposal of all waste material and excess water away from the well site to an approved disposal site and cleanups of spilled excess water.

Item No. D20: Furnishing and installing final well head fittings on monitor well complete – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing wellhead completion in accordance with the drawings.

Item D21: Standby time required by the Owner and/or the Engineer – Total Bid.

Payment will be made at the Contract unit price for the item, which shall be full compensation for providing Standby Time up to 12 hours per day in accordance with the specifications.

PART E. PLUG AND ABANDON EXISTING ONSITE MONITOR WELL

Item No. E.: Plug and Abandon Existing Onsite Monitor Well – Total Bid.

Payment will be made at the Contract lump sum price for the item, which shall be full compensation for providing all equipment, materials and personnel required to plug and abandon the USGS monitor well on the WWTP site using cement with gel as per SWFWMD regulations. The well has 24-inch diameter steel casing set to 1,102 feet bls and 24-inch open hole to 1,247 feet bls.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01041

PROJECT COORDINATION

PART 1 - GENERAL

1.01 PLANT

- A. The Contractor shall furnish personnel and equipment which will be efficient, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the Bid of these Specifications.

1.02 PRIVATE LAND

- A. The Contractor shall not enter or occupy private land outside the site, except by written permission of the appropriate owners. Contractor shall provide Owner a copy of such written permission.

1.03 PIPE LOCATIONS

- A. Pipelines shall be located as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons. Where fittings are noted on the Drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

1.04 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by workmen.

1.05 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

1.06 CARE AND PROTECTION OF WORK

- A. All newly constructed work shall be carefully protected from damage in any way. No wheeling or walking or placing of heavy loads on it shall be allowed on fresh concrete work and all portions damaged shall be reconstructed by the Contractor at his own expense.
- B. All structures shall be protected in a manner approved by the Engineer. Should any of the floors or other parts of the structures become heaved, cracked or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the Contractor at his own expense and to the satisfaction of the Engineer. If, in the final inspection of the work, any defects, faults or omissions are found, the Contractor shall repair, remove and/or replace with proper materials and workmanship any defects, faults or omissions without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein, for at least the guarantee period described in the contract.
- C. Further, the Contractor shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the Owner.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 – GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. The work of all crafts and trades shall be laid out to lines and elevations as established by the Contractor from the Drawings, or from instructions by the Engineer.
- B. Unless otherwise shown, all work shall be plumb and level, in straight lines and true planes, parallel or square to the established lines and levels. The work shall be accurately measured and fitted to tolerances as established by the best practices of the crafts and trades involved, and shall be as required to fit all parts of the work carefully and neatly together.

1.02 SURVEY REFERENCE POINTS

- A. The Contractor shall hire a Florida Professional Land Surveyor (PLS) to identify the existing control points indicated on the Drawings as required.
- B. Existing major horizontal and vertical control points for the Project are those designated on Drawings. Additional control points may be established as approved by the Engineer.
- C. The Contractor shall:
 - 1. protect control points prior to starting work;
 - 2. preserve all permanent reference points during construction;
 - 3. make no changes or relocations unless directed by the Engineer.
 - 4. report to Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations;
 - 5. re-establish any control or reference points and/or property pins destroyed at his expense.

1.03 LINES AND GRADES

- A. The Contractor's PLS shall lay out the axes of all structures and set permanent hubs marking these lines. The Contractor's PLS shall also set a bench mark or marks near the site of all structures to furnish the Contractor with the elevation. The Contractor shall be responsible for establishing all other lines and grades required for the

FIELD ENGINEERING

construction for the project.

- B. When waterlines, sewer force mains and other such pressure pipelines are involved, the Contractor's PLS will stake the location of these lines on the site. Bench marks are required for reference, these shall be established by the Contractor's PLS.
- C. The Contractor shall furnish a Florida Professional Licensed Land Surveyor with all materials, stakes and grade boards that are required for all utility construction layout. In addition, the Contractor shall furnish any aides required by the Engineer in marking the location of the various facilities on the ground, establishing bench levels and determining as-built conditions after the work is completed. The Contractor's personnel engaged in the layout work described herein and the aides furnished to the Engineer shall be fully capable of performing the duties set out herein and shall be fully qualified chiefs and/or chairmen, as required.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

FIELD ENGINEERING

SECTION 01065

PERMITS AND FEES

PART 1 - GENERAL

- A. The Contractor shall obtain and pay for all permits and licenses related to his work as provided for in the General Conditions except as otherwise provided herein.
- B. Permits by Owner: The Owner prior to the advertisement of the project has applied for permits with the following agencies:
 - 1. Florida Department of Environmental Protection Underground Injection Control Class I Injection Well Construction Permit
- C. Work shall be conducted and shall result in construction of the improvements of this project in full accordance with the conditions of the Permits granted for the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Engineer will schedule and administer a preconstruction conference, periodic construction progress meetings, and specially called meetings throughout the progress of the work.
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to ascertain that work is expedited consistent with Contract Documents and construction schedules.

1.02 PRECONSTRUCTION CONFERENCE

- A. A preconstruction conference shall be scheduled as outlined in the General Conditions.
- B. Location: The location of the conference shall be a central site, convenient for all parties, designated by the Engineer.
- C. Attendance Requested:
 - 1. Owner's representative.
 - 2. Resident project representative (RPR).
 - 3. Engineer and his professional consultants.
 - 4. Contractor's representative.
 - 5. Subcontractor's representative.
 - 6. Supplier's representative.
 - 7. Others, as appropriate.
 - 8. Permitting agencies.
- D. Suggested Agenda:
 - 1. Project schedule.

2. Critical work sequencing: Relationships and coordination with other contractors and/or work.
3. Major equipment deliveries and priorities.
4. Project coordination and control.
5. Procedures and processing of:
 - a. Field decisions.
 - b. Proposal requests.
 - c. Submittals.
 - d. Change orders.
 - e. Applications for payment.
6. Submittal of Shop Drawings.
7. Adequacy of distribution of Contract Documents.
8. Procedures for maintaining Record Documents.
9. Use of premises:
 - a. Office, work and storage areas.
 - b. Owner's requirements.
 - c. Access and traffic control.
10. Construction facilities, controls and construction aids.
11. Temporary utilities.
12. Safety and first aid procedures.
13. Check of required Bond and Insurance certifications.
14. Completion time for contract and liquidated damages.
15. Request for extension of contract time.
16. Request for a weekly job meeting for all involved.
17. Security procedures.
18. Procedures for making partial payments.
19. Guarantee on completed work.
20. Equipment to be used.
21. Staking of work.
22. Project inspection.
23. Labor requirements.
24. Laboratory testing of material requirements.
25. Inventory of material stored on site provisions.
26. Requirements of railroads, highway departments, and other organizations.
27. Rights-of-way and easements.
28. Housekeeping procedures.
29. Liquidated damages.
30. Posting of signs.
31. Pay request submittal dates.
32. Equal opportunity requirements.
33. Permits.

1.03 PROGRESS MEETINGS

- A. Regular periodic construction progress meetings will be scheduled unless more frequent meetings are required. The progress meetings will be held every month unless more frequent meetings are required with the first meeting one week after the preconstruction meeting or one week or less after the date of Notice to Proceed.
- B. Meetings shall be held as required by progress of the work.
- C. Location of the meetings: RPR's Field Office.
- D. Attendance:
 - 1. Engineer and his professional consultants (as needed).
 - 2. Contractor.
 - 3. Owner's representative.
 - 4. Subcontractors (as appropriate to the agenda).
 - 5. Suppliers (as appropriate to the agenda).
 - 6. Others (as appropriate).
- E. Suggested Agenda:
 - 1. Review approval of minutes of previous meeting.
 - 2. Review of work progress since previous meeting.
 - 3. Field observations, problems, and conflicts.
 - 4. Problems which impede the Construction Schedule.
 - 5. Review of off-site fabrication and delivery schedules.
 - 6. Corrective measures and procedures to regain projected schedule.
 - 7. Revisions to Construction Schedule.
 - 8. Progress schedule during succeeding work period.
 - 9. Coordination of schedules.
 - 10. Shop Drawing submittals.
 - 11. Maintenance of quality standards.
 - 12. Pending changes and substitutions.
 - 13. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the Project.
 - 14. Other business.
 - 15. Construction Schedule.
 - 16. Critical/long-lead items.

- F. The Contractor shall attend construction progress meetings and shall study previous meeting minutes and current agenda items, in order to be prepared to discuss pertinent topics regarding progress of the work.
- G. The Contractor is to provide a current submittal log at each progress meeting in accordance with Sections 01300 and 01340.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01300

CONTRACTOR SUBMITTALS

PART I - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Wherever submittals are required hereunder, all such Contractor submittals shall be submitted to the Engineer with a copy to the County

1.02 SHOP DRAWINGS

- A. Wherever called for in the Contract Documents, the Contractor shall furnish to the Engineer four (4) sets of Shop Drawings plus the number of copies which the Contractor requires returned in accordance with Section 01340, "Shop Drawings".

1.03 CONTRACTOR'S SCHEDULES

- A. Contractor's schedules shall be prepared, submitted, reviewed, monitored, updated, and utilized in accordance with Section 01310, "Construction Schedules."

1.04 SAMPLES

- A. Unless otherwise specified, whenever in the Specifications samples are required, the Contractor shall submit not less than two (2) samples of each such item or material to the Engineer for approval at no additional cost to the Owner.

1.05 AS-BUILT DRAWINGS

- A. Not required.

1.06 EXCAVATION PLAN

- A. Not required.

1.07 SUBMITTAL OF PROPOSED EQUIVALENT PRODUCTS

- A. All materials, processes, or equipment which are to be offered by the Contractor as equivalent to those indicated or specified in the Contract Documents shall be submitted to the Engineer within twenty (20) calendar days after date of execution of the Agreement.

1.08 CONSTRUCTION PHOTOGRAPHS

- A. Not required.

1.09 AUDIO - VIDEO RECORDS

- A. See Section 01850 Color Audio-Video Preconstruction Record.

1.10 SCHEDULE OF VALUES

- A. After review of the tentative schedule at the pre-construction conference and within (30) days after the Notice to Proceed, Contractor shall prepare and submit to Engineer a schedule of values in accordance with Section 01370, "Schedule of Values", covering each kind of work shall be acceptable to the Engineer before any partial payment estimate is prepared. Such items as Bond premium, temporary construction facilities, and plant may be listed separately in the schedule of values, provided the amounts can be substantiated.
- B. The sum of the items listed in the schedule of values shall equal the contract lump sum price. Overhead and profit shall not be listed as separate items.
- C. An unbalanced schedule of values providing for overpayment of Contractor on items of work which would be performed first will not be accepted. The schedule of values shall be revised and resubmitted until acceptable to the Engineer.

1.11 SCHEDULE OF PAYMENTS

- A. Within thirty (30) days after Notice to Proceed, Contractor shall furnish to the Engineer a schedule of estimated monthly payments based upon the approved schedule of values. The schedule shall be revised and resubmitted each time an application for payment varies more than ten (10) percent from the estimated payment schedule.

1.12 SURVEY DATA

- A. All field books, notes, and other data developed by Contractor in performing the surveys required by the work shall be available to the Engineer for examination throughout the construction period. All such data shall be submitted to the Engineer with documentation required for final acceptance of the work.

1.13 UTILITY INVESTIGATION

- A. Not required.

PART II - PRODUCTS (Not Used)

PART III - EXECUTION (Not Used)

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULES

PART I - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Promptly after award of the Contract and within ten days after the effective date of the Agreement, prepare and submit to the Engineer estimated construction progress schedules for the work, with subschedules of related activities which are essential to its progress.
- B. Submit revised progress schedules on a monthly basis.
- C. No partial payments shall be approved by the Engineer until there is an approved construction progress schedule on hand.
- D. The Contractor shall designate an authorized representative of his firm who shall be responsible for development and maintenance of the schedule and of progress and payment reports. This representative of the Contractor shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the commitments of the Contractor's schedules.

1.02 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide a separate horizontal bar for each trade or operation within each structure or item.
 - 2. Horizontal time scale: In weeks from start of construction and identify the first work day of each month.
 - 3. Scale and spacing: To allow space for notations and future revisions.
 - 4. Minimum sheet size: 24 inches X 36 inches.
- B. Format of listings: The chronological order of the start of each item of work for each structure.

1.03 CONTENT OF SCHEDULES

- A. Construction Progress Schedule
 - 1. Show the complete sequence of construction by activity including:

- a. activity beginning and ending date
 - b. duration
 - c. early start date
 - d. early finish date
 - e. total float
- 2. Show the dates for the beginning of, and completion of, each major element of construction in no more than a two-week increment scale. Specifically list, but not limit to:
 - a. Site clearing
 - b. Site utilities
 - c. Foundation work
 - d. Subcontractor work
 - e. Equipment installations
 - f. Instrumentation
 - g. Painting
 - h. Testing
 - i. Startup
 - j. Pipe installation
 - k. Boring and jacking
 - i. Restoration
- 3. Show projected percentage of completion for each item, as of the first day of each month.
- 4. Show projected dollar cash flow requirements for each month of construction.
- B. Submittals Schedule for Shop Drawings and Samples in accordance with Section 01340. Show:
 - 1. The dates for Contractor's submittals.
 - 2. The dates submittals will be required for owner-furnished products, if applicable.
 - 3. The dates approved submittals will be required from the Engineer.
- C. A typewritten list of all long lead items (equipment, materials, etc.)

1.04 PROGRESS REVISIONS

- A. Indicate progress of each activity of date of submission.
- B. Show changes occurring since previous submission of schedule:

1. Major changes in scope.
2. Activities modified since previous submission.
3. Revised projections of progress and completion.
4. Other identifiable changes.

C. Provide a narrative report as needed to define:

1. Problem areas, anticipated delays, and the impact on the schedule.
2. Corrective action recommended and its effect.
3. The effect of changes on schedules of other prime contractors.

1.05 SUBMISSIONS

A. Submit initial schedules to the Engineer within ten (10) days after the effective date of the Agreement.

1. The Engineer will review schedules and return review copy within 21 days after receipt.
2. If required, resubmit within 7 days after return of review copy.

B. Submit revised monthly progress schedules with that month's application for payment.

1.06 DISTRIBUTION

A. Distribute copies of the reviewed schedules to:

1. The Engineer
2. Job site file
3. Subcontractors
4. Other concerned parties
5. Owner (two copies)

B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

END OF SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall submit to the Engineer for review and exception, if any, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
2. Within thirty (30) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
3. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and the Engineer. This log should include the following items:
 - a. Submittal-Description and Number assigned.
 - b. Date to Engineer.
 - c. Date returned to Contractor (from Engineer).
 - d. Status of Submittal (Approved, Approved as Noted, Rejected/- Resubmit).
 - e. Date of Resubmittal and Return (as applicable).
 - f. Date material release (for fabrication).
 - g. Projected date of fabrication.

- h. Projected date of delivery to site.
- i. Status of O&M manuals submittal.
- j. Specification Section.
- k. Drawings Sheet Number.

1.02 CONTRACTOR'S RESPONSIBILITY

- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents. If the Contractor takes exception to the specifications, the Contractor shall note the exception in the letter of transmittal to the Engineer.
- B. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance with Specifications.
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawings submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Engineer, with approval.
- E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than thirty (30) calendar days for checking and appropriate action from the time the Engineer receives them.
- F. All submittals shall be accompanied with a transmittal letter prepared in duplicate containing the following information:
 - 1. Date.

2. Project Title and Number.
 3. Contractor's name and address.
 4. The number of each Shop Drawings, Project Data, and Sample submitted.
 5. Notification of Deviations from Contract Documents.
 6. Submittal Log Number conforming to Specification Section Numbers.
- G. The Contractor shall submit four (4) copies of descriptive or product data submittals to complement shop drawings for the Engineer plus the number of copies which the Contractor requires returned. All blueprint shop drawings shall be submitted with one (1) set of Mylar reproducible and four (4) sets of prints. The Engineer will review the blueprints and return to the Contractor the set of marked-up Mylar reproducible with appropriate review comments.
- H. The Contractor shall be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary Shop Drawings.
- I. The Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment he proposed to supply both as pertains to his own work and any work affected under other parts, headings, or divisions of drawings and specifications.
- 1.03 ENGINEER'S REVIEW OF SHOP DRAWINGS
- A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation. The Engineer's review and exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown.
- B. The review of drawings and schedules will be general, and shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
 3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.

- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings without noting an exception.
- D. When reviewed by the Engineer, each of the Shop Drawings will be identified as having received such review being so stamped and dated. Shop Drawings stamped "REVISE AND RESUBMIT" and with required corrections shown will be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.
- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- G. Shop drawings and submittal data shall be reviewed by the Engineer for each original submittal and first and second resubmittal; thereafter review time for subsequent resubmittals shall be charged to the Contractor in accordance with the terms of the Engineer's Agreement with the Owner.
- H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.
- I. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor for resubmittal. Unless otherwise specifically permitted by the Engineer, Contractor shall make all submittals in groups containing all associated items for:
 - 1. Systems.
 - 2. Processes.
 - 3. As indicated in specific specifications sections. All drawings, schematics, manufacturer's product data, certifications and other shop drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface checking.

1.04 SHOP DRAWINGS

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of

fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above. As used herein, the term "manufactured" applies to standard units usually mass-produced; and "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements.

- B. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked to identify pertinent materials, product or models. Delete information which is not applicable to the Work by striking or cross-hatching.
- C. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- D. Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Project Title and Number.
 - 2. Name of project building or structure.
 - 3. Number and title of the shop drawing.
 - 4. Date of shop drawing or revision.
 - 5. Name of contractor and subcontractor submitting drawing.
 - 6. Supplier/manufacturer.
 - 7. Separate detailer when pertinent.
 - 8. Specification title and number.
 - 9. Specification section.
 - 10. Application Contract Drawing Number.
- E. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.

- F. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- G. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- H. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five (5) installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.
- I. Only the Engineer will utilize the color "red" in marking Shop Drawing submittals.

1.05 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's plan for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and falsework; for underpinning; and for such other work as may be required for construction but does not become an integral part of the Project.
- B. Copies of working drawings as noted in paragraph 1.05 A. above, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. Working drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the Engineer, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the Owner and Engineer shall have no responsibility therefore.

1.06 SAMPLES

- A. The Contractor shall furnish, for the approval of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the

Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.

- B. Samples shall be of sufficient size and quantity to clearly illustrate:
1. Functional characteristics of the product, with integrally related parts and attachment devices.
 2. Full range of color, texture and pattern.
 3. A minimum of two samples of each item shall be submitted.
- C. Each sample shall have a label indicating:
1. Name of Project.
 2. Name of Contractor and Subcontractor.
 3. Material or Equipment Represented.
 4. Place of Origin.
 5. Name of Producer and Brand (if any).
 6. Location in Project.
- (Samples of finished materials shall have additional marking that will identify them under the finished schedules).
- D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in paragraph 1.06 C. above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements.
- E. Approved samples not destroyed in testing shall be sent to the Engineer or stored at the site of the work. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01370

SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Submit to the Engineer a Schedule of Values allocated to the various lump sum portions of the Work, within thirty (30) days after date of Notice to Proceed, and as otherwise specified or requested to be submitted earlier as evidence of the Apparent Low Bidder's qualifications.
2. Upon request of the Engineer, support the values with data which will substantiate their correctness.
3. The Schedule of Values shall establish the actual value of the component parts of the Work to be completed, and shall be used as the basis for the Contractor's Applications for Payment

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Type schedule on an 8-1/2 inch x 11 inch or 8-1/2 inch by 14 inch white paper. Contractor's standard forms and computer printout will be considered for approval by the Engineer upon Contractor's request. Identify schedule with:
1. Title of project and location.
 2. Engineer and project number.
 3. Name and address of Contractor.
 4. Contract designation.
 5. Date of submission.
- B. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing item prices for progress payments during construction.
- C. Identify each line item with the number and title of the respective major section of the specifications.
- D. For each major line item, list sub-values of major products or operations under the item.

- E. For the various portions of the Work:
 - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
 - 2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials upon request by the Engineer.
 - b. The total installed value.
- F. The sum of all lump sum values listed in the schedule shall equal the total Contract Sum.

1.03 SUBSCHEDULE OF UNIT MATERIAL VALUES

- A. Submit a subschedule of unit costs and quantities for products on which progress payments will be requested for stored products.
- B. The form of submittal shall parallel that of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.
- C. The unit values for the materials shall be broken down into:
 - 1. Cost of the material, delivered and unloaded at the site, with taxes paid.
 - 2. Copies of paid invoices for component material shall be included with the payment request in which the material first appears.
- E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

1.04 REVIEW AND RESUBMITTAL

- A. After review by Engineer, revise and resubmit Schedule of Values and Schedule of Unit Material Values as required.
- B. Resubmit revised Schedules in same manner.

END OF SECTION

SECTION 01400

GENERAL QUALITY CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

A. Definitions:

1. Specific quality control requirements for the work are indicated throughout the Contract Documents. In particular, quality control provisions for manufactured products are specified in individual work sections and in other related sections of Division 1; and are not repeated in this section. The requirements of this section are primarily related to the performance of the work beyond the furnishing of manufactured products. The term "Quality Control" includes, but is not necessarily limited to, inspection and testing and associated requirements. This section does not specify or modify the Engineer's duties relating to Contract quality review and observation.

1.02 QUALITY ASSURANCE

A. General Workmanship Standards:

1. Except as more definitively specified in other sections of Division 1, comply with the recognized workmanship quality standards within the industry as applicable to each unit of work, including ANSI standards where applicable. It is a requirement that each category of tradesman or installer performing the work be pre-qualified, to the extent of being familiar with the applicable and recognized quality standards for his category of work, and being capable of workmanship complying with those standards.

1.03 SUBMITTALS

- A. Refer to Section 01300 for the general submittal requirements applicable to inspection and test reports, project photographs, damage surveys, quality control samples, maintenance agreements, guaranties, warranties, and similar documentation of quality compliances as required. Refer to the applicable individual work sections of Division 2 through 16 where applicable for specific certification and submittal requirements.
 1. Copies and Distribution: Where inspection and test reports and certifications are required by governing authorities, provide additional copies as required, and, where required, send copies directly from inspection or testing agency to governing authority.

1.04 PRODUCT DELIVERY-STORAGE-HANDLING

- A. Materials, supplies, and equipment delivered to the site shall be inspected for damage, unloaded, and stored with a minimum of handling. Delivered items shall not be stored directly on the ground. Handle, store and protect materials and products, including fabricated components, by methods and means recommended by the manufacturer which will prevent damage, deterioration and losses (and resulting delays), thereby ensuring highest quality results as the performance of the work progresses. Control delivery schedules so as to minimize unnecessary long-term storage at the project site prior to installation. Periodically exercise equipment stored in accordance with the manufacturer's recommendations.
- B. The Engineer will refuse to accept, or sample for testing, materials, supplies, or equipment that have been improperly or unsuitably stored.
- C. Materials, supplies or equipment found defective or unfit for use shall not be incorporated in the work and shall immediately be removed from the construction or storage sites and replaced with new materials, supplies or equipment by the Contractor at no additional cost to the County.

1.05 RESPONSIBILITY FOR INSPECTIONS AND TESTS

- A. Contractor's Responsibility:
 - 1. It will be the Contractor's responsibility to employ and pay for the services of certified independent testing laboratories. In addition, the Contractor shall pay for all retests required due to failure to meet specifications.
 - a. The certified independent testing laboratories qualifications, test procedures, forms and quality control program description shall be submitted to the Engineer for review and approval.
 - 2. No failure of test agencies, whether engaged by the County or Contractor, to perform adequate inspections or tests or to properly analyze or report results, shall relieve the Contractor of responsibility for the fulfillment of the requirements of the Contract Documents. It is recognized that the required inspection and testing program is intended to assist the Contractor, County, Engineer and governing authorities in the nominal determination of probable compliances with requirements for certain crucial elements of work. The program is not intended to limit the Contractor in his regular quality control program, as needed for general assurance of compliances.
- B. Coordination with County's Agencies:
 - 1. Afford access and reasonable time in the construction sequence for County's inspections and tests to be performed. Cooperate with agencies and provide incidental labor and services needed for the removal and delivery of test

samples, and for inspections and taking measurements. Provide patching and restoration services where test samples have been removed.

C. Test Agency Responsibilities:

1. Test agencies, regardless of whether engaged by the County or Contractor, are not authorized to change or negate the requirements of the Contract Documents. Each agency shall coordinate its assigned work with the construction schedule as maintained by the Contractor, and shall perform its work promptly so as not to delay the work avoidably. Observations (by agencies) having a bearing on the work shall be reported to the Engineer, in the most expeditious way possible, and shall be recorded in writing by the agency. Agency personnel shall not interfere with or assume the duties of the Contractor.

PART 2 - PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. All equipment and materials furnished under these specifications shall be new and unused.

2.02 PROJECT PHOTOGRAPHS

- A. The Contractor shall provide dated color DVDs or dated photographs before, during and after construction begins, and will furnish the County with copies before, during and after construction. The DVDs and/or photographs must be submitted to and approved by the Engineer prior to starting construction work and after all survey stakeout is complete. If DVDs are used, the Contractor shall submit data sheets, which indicate problem areas by, index number and brief description of condition.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Pre-Installation Conferences:

1. Well in advance of the installation of every major unit of work which requires coordination with other work, the Contractor shall meet at the project site with installers and representatives of manufacturers and fabricators who are involved in or affected by the unit of work, and in its coordination or integration with other work which has preceded or will follow. The Contractor shall advise Engineer of scheduled meeting dates. At each meeting, review the progress of other work and preparations for the particular work under consideration including, but not limited to, the requirements of the Contract Documents, options, related change orders, purchases, deliveries, shop drawings, product data, quality control samples,

possible conflicts, compatibility problems, time schedules, weather limitations, temporary facilities, space and access limitations, structural limitations, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection. The Engineer will record the significant discussions of each conference, and the agreements and disagreements, along with the final plan of action. The Engineer will distribute record of meeting promptly to everyone concerned.

2. The Contractor shall not proceed with the work if the associated pre-installation conference cannot be concluded successfully. The Contractor shall instigate actions to resolve impediments to the performance of the work, and reconvene the conference at the earliest date feasible, but no longer than five (5) calendar days.

B. Installer's Inspection of Conditions:

1. The Contractor shall require the installer of each major unit of work to inspect the substrate to receive the work, and the conditions under which the work will be performed, and to report (in writing to the Contractor) unsatisfactory conditions. The Contractor shall not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 INSTALLATION QUALITY CONTROL

A. Manufacturer's Instructions:

1. Where installations include manufactured products, the Contractor shall comply with the manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in the Contract Documents.

B. The Contractor shall inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.

1. The Contractor shall provide attachment and connection devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerances if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual effect choices to Engineer for final decision.
2. The Contractor shall recheck measurements and dimensions of the work, as

an integral step of starting each installation.

3. The Contractor shall install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion, which will ensure the best possible results for each unit of work, in coordination with the entire work. Isolate each unit of work from noncompatible work, as required to prevent deterioration.
4. The Contractor shall coordinate enclosure (closing-in) of work with required inspections and tests, so as to avoid the necessity of uncovering work for that purpose.

C. Mounting Heights:

1. Except as otherwise indicated, the Contractor shall mount individual units of work at the industry-recognized standard mounting heights, for the applications indicated. Refer questionable mounting height choices to the Engineer for final decision.

- D. Adjust, clean, lubricate, restore marred finishes, and protect newly installed work, to ensure that it will remain without damage or deterioration during the remainder of the construction period.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor provided testing laboratory services.

1.02 SELECTION AND PAYMENT

- A. Contractor will employ and pay for services of independent testing laboratory to perform specified inspection and testing.
- B. Contractor is responsible for all costs associated with the retesting of failed portions of the work and/or additional testing required to qualify the material that does not meet contract specifications during installations.
- C. Employment of testing laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

1.03 LABORATORY REPORTS

- A. After each inspection and test, laboratory will submit copies of laboratory report to Owner, Engineer, and Contractor, including date issued, Project title and number, name of inspector, date and time of sampling or inspection, identification of product and Specifications section, location in Project, type of inspection or test, date of test, results of tests, and conformance with Contract Documents.

1.04 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of Work.
- C. Laboratory may not assume duties of Contractor.
- D. Laboratory has no authority to stop Work.

1.05 CONTRACTOR RESPONSIBILITIES

- A. Contractor shall be responsible for all testing laboratory services and engineering data required for Engineer's review of materials and equipment proposed to be used in the work. The results of the testing shall be certified by the testing laboratory.
- B. Deliver to laboratory at designated location adequate samples of materials proposed to be used which require testing, together with proposed mix designs.
- C. Cooperate with laboratory personnel, and provide access to Work.
- D. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.
- E. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
- F. Provide testing per specifications for factory materials and field installation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Electricity, Lighting.
- B. Telephone Service.
- C. Water.
- D. Sanitary Facilities.
- E. Barriers.
- F. Access Roads.
- G. Cleaning during Construction.
- H. Field Offices and Sheds.
- I. Parking.

1.02 ELECTRICITY, LIGHTING

- A. The Contractor shall provide the level of electric service required for all construction operations.

1.03 TELEPHONE SERVICE

- A. Not required.

1.04 WATER

- A. The Contractor shall provide the level of water service required for all construction operations.

1.05 SANITARY FACILITIES

- A. The CONTRACTOR shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing