



**Invitation for Bids**

**IFB-143-23-JJ**

**[Injection Well No. 2 Repair]  
[23-9737]**

**FOR THE**

**CITY OF HOLLYWOOD, FLORIDA (CITY)**

**IFB Issue Date:** November 8, 2023  
**Questions Due Date:** December 6, 2023  
**Submittal Due Date:** December 13, 2023, at 3 p.m. ET

**CITY OF HOLLYWOOD**  
**IFB 143-23-JJ**  
**[Injection Well No. 2 Repair]**  
**[23-9737]**

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## SECTION I – INTRODUCTION

### 1.1 **Purpose**

The City of Hollywood, Florida (City) is seeking bids from qualified and experienced firms, hereinafter referred to as the Contractor or Bidder, to provide construction services for the Injection Well No. 2 Repair for the City, in accordance with the terms, conditions, and specifications contained in this solicitation. Responses to this solicitation are due by December 13, **2023, by 3:00 PM EST**, and will be opened in a virtual public setting on December 13, **2023, at 3:00PM EST** at **[www.opengov.com](http://www.opengov.com)**.

Submittals shall be considered an offer on the part of the bidder/proposer, which offer shall be deemed accepted upon approval of the City, and in case of default, the City reserves the right to accept or reject any or all bids/proposals, to waive irregularities and technicalities, and request new bids/proposals. The City also reserves the right to award any resulting agreement as it deems will best serve the interests of the city.

**Submission of a bid/proposal shall serve as prima facie evidence that the Bidder/Proposer has examined this solicitation and is fully aware of all conditions affecting the provision of services and the evaluation criteria and scoring methodology as set forth in this solicitation document.**

### 1.2 **Pre-bid Conference and/or Site Visit (Mandatory)**

There will be a mandatory pre-bid conference and site visit scheduled for this solicitation. Attendance is required if the event is mandatory, and in the event that it is non-mandatory, it is strongly suggested that all Contractors attend the pre-bid conference and/ site visit to receive information that may be critical to their understanding of this solicitation.

The mandatory pre-bid conference will be held on:

**November 16, 2023, at 2:00 pm**  
**Southern Regional Wastewater Treatment Plant**  
**1621 N. 14<sup>th</sup> Avenue**  
**Hollywood, Florida 33021**  
**First Floor Conference Room**

### 1.3 **OpenGov**

The City of Hollywood uses OpenGov (<https://procurement.opengov.com/portal/hollywoodfl>) to administer the competitive solicitation process, including but not limited to soliciting bids, issuing addenda, posting results and issuing notification of an intended decision.

The City shall not be responsible for a Bidders inability to submit a bid by the bid end date and time for any reason, including issues arising from the use of OpenGov.

### 1.4 **Point of Contact**

For information concerning procedures for responding to this solicitation, contact the Point of Contact within the Office of Procurement and Contract Compliance, Otis J. Thomas, Senior Purchasing Agent at [jjoinville@hollywoodfl.org](mailto:jjoinville@hollywoodfl.org) or by phone at (954) 921-3290, or Staci Alli, Administrative Assistant I at [salli@hollywoodfl.org](mailto:salli@hollywoodfl.org) or by phone at 954-921-3222. Such contact is to be for clarification purposes only. All questions must be submitted in writing via OpenGov by December 4, 2023, **by 3:00 PM EST** in order to receive a response.

Project Manager: Roger Bezerra, Department of Public Utilities, email: [rbezerra@hollywoodfl.org](mailto:rbezerra@hollywoodfl.org) or by phone: (954) 924-2985.

For information concerning technical specifications, please utilize the question / answer feature provided by OpenGov at <https://procurement.opengov.com/portal/hollywoodfl>. Questions of a material nature must be received prior to the cut-off date specified in the solicitation schedule. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of OpenGov Site). Bidders please note: No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in OpenGov shall become part of any contract that is created from this solicitation.

It is the sole responsibility of the Bidder to ensure that their bid is submitted electronically through OpenGov at <https://procurement.opengov.com/portal/hollywoodfl>.

### **1.5 Cone of Silence**

The City of Hollywood City Commission adopted Ordinance No. O-2007-05, which created Section 30.15(F) imposing a Cone of Silence for certain City purchases of goods and Services.

The Cone of Silence refers to limits on communications held between vendors and vendor's representatives and City elected officials, management and staff during the period in which a Formal Solicitation is open.

The Ordinance does allow potential vendors or vendor's representatives to communicate with designated employees for the limited purpose of seeking clarification or additional information. The names and contact information of those employees that may be contacted for clarification or additional information are included in the solicitation.

The Cone of Silence does not prohibit a vendor or vendor's representative from communicating verbally, or in writing with the City Manager, the City Manager's designee, the City Attorney or the City Attorney's designee on those procurement items to be considered by the City Commission.

The Cone of Silence does not prohibit a vendor or vendor's representative from making public presentations at a duly noticed pre-bid conference or duly noticed evaluation committee meeting or from communicating with the City Commission during a duly noticed public meeting.

The Cone of Silence shall be imposed when a formal competitive solicitation has been issued and shall remain in effect until an award is made, a contract is approved, or the City Commission takes any other action which ends the solicitation.

To view the Cone of Silence, go to the City of Hollywood Code of Ordinance online, and view [Section 30.15F](#).

All communications regarding this bid should be sent in writing to the The Office of Procurement and Contract Compliance as identified in this bid.

*END OF SECTION*

## **SECTION II - SPECIAL TERMS AND CONDITIONS**

### **2.1 Addenda, Changes, and Interpretations**

It is the sole responsibility of each firm to notify the Point of Contact utilizing the question / answer feature provided by OpenGov and request modification or clarification of any ambiguity, conflict, discrepancy, omission or other error discovered in this competitive solicitation. Requests for clarification, modification, interpretation, or changes must be received prior to the Question and Answer (Q & A) Deadline. Requests received after this date may not be addressed. Questions and requests for information that would not materially affect the scope of services to be performed or the solicitation process will be answered within the question / answer feature provided by OpenGov and shall be for clarification purposes only. Material changes, if any, to the scope of services or the solicitation process will only be transmitted by official written addendum issued by the City and uploaded to OpenGov as a separate addendum to the solicitation. Under no circumstances shall an oral explanation given by any City official, officer, staff, or agent be binding upon the City and should be disregarded. All addenda are a part of the competitive solicitation documents and each firm will be bound by such addenda. It is the responsibility of each to read and comprehend all addenda issued.

### **2.2 Dimensions, Quantities and Subsurface Information**

Dimensions, quantities, and subsurface information supplied by the City are in no way warranted to indicate true amounts or conditions. Bidders/Contractors shall neither plead misunderstanding or deception nor make claims against the City if the actual amounts, conditions, or dimensions do not conform to those stated. Any "Outside" reports made available by the Engineer are neither guaranteed as to accuracy or completeness, nor a part of the Contract Documents.

### **2.3 Trench Safety Form**

The Trench Safety Form included in the Bid Documents must be completed and signed. Noncompliance with this requirement may invalidate the bid.

### **2.4 Changes and Alterations**

Bidder may change or withdraw a Bid at any time prior to Bid submission deadline; however, no oral modifications will be allowed. Modifications shall not be allowed following the Bid deadline.

### **2.5 Bidder's Costs**

The City shall not be liable for any costs incurred by Bidders in responding to this solicitation.

### **2.6 Pricing/Delivery**

All pricing must include delivery and installation and be quoted FOB: Destination, unless specified otherwise in Section III.

### **2.7 Price Validity**

Prices provided in this solicitation shall be valid for at least One-Hundred and Twenty (120) days from time of solicitation opening unless otherwise extended and agreed upon by the City and Bidder.

### **2.8 No Exclusive Contract**

Bidder agrees and understands that the contract shall not be construed as an exclusive arrangement and further agrees that the City may, at any time, secure similar or identical services from another vendor at the City's sole option.

## **2.9 Responsive**

In order to be considered responsive to the solicitation, the firm's bid shall fully conform in all material respects to the solicitation and all of its requirements, including all form and substance.

## **2.10 Responsible**

In order to be considered as a responsible firm, firm shall be fully capable to meet all of the requirements of the solicitation and subsequent contract, must possess the full capability, including financial and technical, to perform as contractually required, and must be able to fully document the ability to provide good faith performance.

## **2.11 Minimum Qualifications**

To be eligible for award of a contract in response to this solicitation, the Bidder must demonstrate that they have successfully completed services, as specified in Section III of this solicitation, are normally and routinely engaged in performing such services, and are properly and legally licensed (if required) to perform such work. Bidder must possess, and be able to provide the City with any and all required Federal, State, County and/or municipal licenses, and occupational licenses. Bidder must be able to provide proof of valid licensing for all subcontractors and/or material suppliers hired by the contractor, if requested. In addition, the Bidder must have no conflict of interest with regard to any other work performed by the Bidder for the City.

## **2.12 Award of Contract**

Award may be in the aggregate, or by line item, or by group, whichever is determined to be in the best interest of the City.

The Contract will be awarded only to a Bidder, who in the opinion of the **Engineer**, is fully qualified to undertake the work, quoting the lowest price, for that product/service that will best serve the needs of the City. The City reserves the right before awarding the Contract to require a Bidder to submit such evidence of his qualifications as it may deem necessary and may consider any available evidence of his financial status, technical qualifications, and other qualifications and abilities.

The City also reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City.

## **2.13 Execution Of Contract**

The Bidder to whom the Contract is awarded shall, within ten days of the date of award, execute and deliver three (3) copies of the following to the Engineer.

- A. The Contract
- B. Performance and Payment Bond
- C. Evidence of required Insurance
- D. Proof of authority to execute the Contract
- E. Proof of authority to execute the Bond on behalf of the Awardee
- F. List of Subcontractors, estimated Contract Value for each and proof that such subcontractors possess all required Federal, State, County and/or municipality licenses, including but not limited to certified of competency and occupational license

The above documents must be furnished, executed and delivered before the Contract will be

executed by the City. The Contract shall not be binding upon the City until it has been executed by the City and a copy of such fully executed Contract is delivered to the Contractor.

**2.14 Failure To Execute Contract, Bid Guaranty Forfeited**

Should the Bidder to whom the Contract has been awarded refuse or fail to complete the requirements of Section 2.13 above within ten (10) days after Notice of Award, the additional time in days (including weekends) required to CORRECTLY complete the documents will be deducted, in equal amount, from the Contract Time, or the City may elect to revoke the Award. The Bid Guaranty of any Bidder failing to execute the awarded Contract shall be retained by the City and the Contract awarded as the Commission desires.

**2.15 Manufacturer/Brand/Model Specific Request**

This is a manufacturer/brand/model specification. No substitutions will be allowed unless specified in Form 3 or Attachment D, – Technical Specifications.

**2.16 Permits and Fees** Refer to Attachment D – Technical Specifications (Section 01025 Basis of Payment)

**2.17 Contract Security**

When the awarded bidder delivers the executed contract to the City, it must be accompanied by the required bonds.

**2.18 Contract Period**

The initial contract term shall commence upon date of award by the City for a six month term. In the event services are scheduled to end because of the expiration of this contract, the Contractor shall continue the service upon the request of the City as authorized by the awarding authority. The extension period shall not extend for more than 120 days beyond the expiration date of the existing contract. The Contractor shall be compensated for the service at the rate in effect when this extension clause is invoked by the City.

**2.19 Bid Guaranty**

A Bid Guaranty in the form of a Cashier's Check, Certified Check or Bid Bond executed by the Bidder and a qualified Surety in the amount of 5% of the Bid is required for this project.

**2.20 Warranties of Usage**

Any estimated quantities listed are for information and tabulation purposes only. No warranty or guarantee of quantities needed is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

**2.21 Rules and Submittals of Bids**

The signer of the bid must declare that the only person(s), company or parties interested in the proposal as principals are named therein; that the bid is made without collusion with any other person(s), company or parties submitting a bid; that it is in all respects fair and in good faith, without collusion or fraud; and that the signer of the bid has full authority to bind the principal bidder.

**2.22 Tie Breaker**

In cases where there is a tie for the bid award, the award shall be made by giving preference to the low bidder(s) with the following items (in this order): (1) maintenance of a drug-free workplace in accordance with the requirements of Florida Statutes Section 287.087, (2) local Hollywood vendor preference, (3) closest proximity/location to project site or City Hall, and/or (4) minority-owned or

disadvantaged business status. If a tie still exists after the aforementioned tiebreakers are utilized, the Chief Procurement Officer will make a recommendation for award among the tied bidders.

**2.23 Conflict of Interests Prohibited**

Any respondent submitting a response to this solicitation is responsible for being aware of, and complying with [Section 34.02](#) of the City Code of Ordinances. If you have questions concerning whether you may or may not need to comply with the ordinance, please contact the City of Hollywood, City Clerk's Office at 954-921-3211.

**2.24 Protest Procedure**

Any respondent who is not recommended for award of a contract and who alleges a failure by the City to follow the City's [Procurement Code](#) or any applicable law may protest to the CPO, by delivering a letter of protest to the CPO in accordance with [Section 38.52](#) of the City's [Procurement Code](#) within five days after a notice of intent to award is posted on the City's web site, OPENGOV, City Clerk's Office, Open Government, and/or City's Sunshine Board (<https://www.hollywoodfl.org/Archive.aspx?AMID=140>).

**2.25 Insurance Requirements**

Contractor shall maintain, at its sole expense, during the term of this agreement the following insurances:

The insurance required by Article 5.6 of the General Conditions, Public Utilities shall be as follows: Any sub-contractor shall supply such similar insurance required of the Contractor. Such certificates shall name the City as additional insured on the general liability and auto liability policies.

The Contract and Subcontractors shall furnish certificates of insurance to the Risk Management Director for review and approval prior to the execution of this agreement. No failure to renew, material change or cancellation of, the insurance shall be effective without a 30-day prior written notice to and approval by the Owner.

1. Commercial General Liability:

Prior to the commencement of work governed by this contract, the Consultant shall obtain General Liability Insurance. Coverage shall be maintained throughout the life of the contract and include, as a minimum:

- a. Premises Operations
- b. Products and Completed Operations
- c. Personal & Advertising Injury
- d. Damages to rented premises

The minimum limits acceptable shall be:

\$2,000,000 Each Occurrence / \$4,000,000 General Aggregate

The City of Hollywood shall be named as Additional Insured.

2. Automobile Liability Insurance:

Recognizing that the work governed by this contract requires the use of vehicles, the Consultant, prior to the commencement of work, shall obtain Vehicle Liability Insurance. Coverage shall be maintained throughout the life of the contract and include, as a minimum, liability coverage for:

Owned, Non-Owned, and Hired Vehicles

Coverage shall be maintained throughout the life of the contract and include, as a minimum, liability coverage for:

Owned, Non-Owned, and Hired Vehicles

The minimum limits acceptable shall be:

\$1,000,000 Combined Single Limit

If split limits are provided, the minimum limits acceptable shall be:

\$ 500,000 per Person

\$1,000,000,000 per Occurrence

\$ 100,000 property damage

The City of Hollywood shall be named as Additional Insured.

3. Worker's Compensation Insurance:

Prior to the commencement of work governed by this contract, the Consultant shall obtain Workers' Compensation Insurance with limits sufficient to respond to the applicable state statutes.

In addition, the Consultant shall obtain Employers' Liability Insurance with limits of not less than:

\$500,000 Bodily Injury by Accident

\$500,000 Bodily Injury by Disease, policy limits

\$500,000 Bodily Injury by Disease, each employee

4. Pollution Liability: (If applicable)

The minimum limits of liability shall be:

\$1,000,000 each claim / \$2,000,000 aggregate

Including non-owned disposal sites.

**2.26 Uncontrollable Circumstances (Force Majeure)**

The City and Contractor will be excused from the performance of their respective obligations under this agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, acts of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

**2.26.1** The non performing party gives the other party prompt written notice describing the particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;

**2.26.2** The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure; and

**2.26.3** No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and

**2.26.4** The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force

Majeure. The term of the agreement shall be extended by a period equal to that during which either party's performance is suspended under this Section.

**2.27 Supplier Portal (Oracle) Payment Method**

The City has implemented software that contains a supplier portal allowing suppliers to submit and update their information via the supplier portal. New suppliers will be required to register; and current suppliers will need to confirm and update their information.

Firms are responsible for ensuring that all contact, payment, and general information is updated at all times, and will not hold the City liable for any inaccurate information.

**2.28 Debarred or Suspended Bidders or Proposers**

Firm(s) certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any federal, state, county or municipal department or agency.

**2.29 Payment and Performance Bond**

A Performance Bond and a Payment Bond each equal to 100 percent of the total Bid will be required of the Awardee. The Bond must be written through a company licensed to do business in the State of Florida and be rated at least "A", Class X, in the latest edition of "Best's Key Rating Guide", published by A.M. Best Company. As per Florida Statute Section 255.05, the Contractor shall be required to record the payment and performance bonds in the public records of Broward County

**2.30 Public Records**

**A. Public Records/Trade Secrets/Copyright:**

**All responses will become the property of the City. The Consultant's response to the solicitation is a public record pursuant to Florida law and is subject to disclosure by the City pursuant to Chapter 119.07, Florida Statutes ("Public Records law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this solicitation and the Contract to be executed for this solicitation, subject to the provisions of Chapter 119, Florida Statutes.**

Any language contained in the Consultant's response to the solicitation purporting to require confidentiality of any portion of the Consultant's response to the solicitation, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Consultant submits any documents or other information to the City that the Consultant claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Consultant shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Consultant must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Consultant's response to the solicitation constitutes a Trade Secret. The City's determination of whether an exemption applies shall be final, and the Consultant agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of the City. Proposals purporting to be subject to copyright protection in full or in part will be rejected.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS

PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED.

## **B. PUBLIC RECORDS GENERAL**

**IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: (954-921-3211), pcerny@hollywoodfl.org, CITY CLERK'S OFFICE, 2600 HOLLYWOOD BLVD, HOLLYWOOD, FLORIDA 33020)**

Consultant shall:

1. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Consultant does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Consultant or keep and maintain public records required by the City to perform the service. If the Consultant transfers all public records to the City upon completion of this Contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Consultant keeps and maintains public records upon completion of this Contract, the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City. It is solely and exclusively the Contractor's responsibility to familiarize itself with Chapter 119, Florida Statutes, and to ensure compliance with its requirements.

### **2.31 Local Preference**

When the lowest responsive responsible bidder is a non-Hollywood business and a responsive responsible local Hollywood vendor's Bid is within 5% of the Bid submitted by the lowest responsive responsible bidder, the local vendor is allowed to submit a second Bid. The second bid from the local Hollywood bidder must be lower than the bid submitted by the lowest responsive and responsible non-Hollywood bidder by at least 1% in order for the bid to be awarded to the local Hollywood bidder. If more than one responsive and responsible local Hollywood vendor is within 5%, each would be permitted to submit a best and final offer and the local Hollywood vendor submitting the lowest bid will be awarded the contract; provided, however, if none of the local Hollywood vendors bids are lower than the lowest responsive and responsible non-Hollywood bidder by at least 1%, the non-Hollywood bidder will be awarded the contract.

*END OF SECTION*

## SECTION III - SCOPE OF SERVICES

### 3.1 Project Description

Work under this Contract consists of the furnishing of all labor, materials, equipment, services and incidentals for repair of the deep Injection Well No. 2 (IW-2). This work includes but is not limited to modifications to the upper portion of the 24-inch diameter injection well casing, cutting and removing portions of the other well casings, modification to the concrete slab at the injection well, concrete pipe supports, relocation and reinstallation of existing field instrumentation, reconnecting the existing WWTP programmable logic controller (PLC), reinstallation of field instruments, and a partial mechanical integrity test (MIT). The work also includes injection well concrete pad repairs, housekeeping pads and all associated general, civil, mechanical, structural, piping, painting, electrical, instrumentation and appurtenant work, complete, tested and ready for operation.

The Contractor agrees to cooperate and work with **[ADDITIONAL DEPARTMENTS THAT MAY REQUIRE COORDINATION]**.

### 3.2 Technical Specifications

Refer to Appendix D.

### 3.3 Contractor Qualifications

The contract will be awarded only to a responsive contractor qualified by experience to do the Work specified. The bidder shall submit, prior to award of contract, satisfactory evidence of his experience in like Work and that he is fully prepared with the necessary organization, capital, equipment and machinery to complete the Work to the satisfaction of the City within the time limit stated. In addition to the above, the Contractor shall satisfy the following criteria:

The bidder needs to have an active Water Well Contractor license (in Florida). Have performed a minimum of five (5) FDEP UIC well construction and/or MIT projects within the past ten (10) years, of which at least two were MITs and two included 10-inch minimum diameter well casing installations to a depth of at least 1,200 feet below land surface.

Form 15 – Information Required from Bidders, shall be completed fully and accurately by the Contractor and submitted with the bid. Information included on the questionnaire will be used in evaluating the qualifications of the Contractor. The City reserves the right to request additional information not identified on the questionnaire.

### 3.4 Subcontractors

For the City to be assured that only competent and qualified subcontractors will be employed on this project, each Bidder shall submit in the bid a list of the subcontractors performing work on this project. This subcontractors list shall include each firm's name, address, telephone number, contact person and work to be performed. Subcontractors shall be properly registered or licensed with the State of Florida, Broward County and the City of Hollywood. Subcontractors shall, in the City's opinion, be qualified both technically and financially to perform the work.

The City reserves the right to reject any subcontractor who is deemed by the City to be unacceptable technically or financially, or has previously performed work which the City believes to be unsatisfactory. No change may be made to this list of subcontractors by the Contractor, before or after contract award, without the express written consent of the City.

If, prior to award, the City rejects any subcontractor, the Contractor shall be afforded the opportunity to submit qualifications for an alternate subcontractor with no attendant increase in the base lump sum bid amount, adjustment of contract time or alteration of the bid documents. Such qualifications will be due within ten (10) days of receipt of notification of subcontractor rejection. Failure to submit an acceptable alternate subcontractor may result in rejection of the bid. In this event, the bid bond shall be returned to Contractor without claim by the City and with forfeiture of all claim rights by the Contractor.

3.5 **Deliverables and Objectives**

Refer to Attachment B General Conditions, Attachment C Supplementary General Conditions, Attachment D Technical Specifications and Attachment E Drawings.

3.6 **Project Schedule / Timeline**

Refer to Appendix C, Supplementary conditions, Section 1, Project Schedule.

3.7 **Questions**

Refer to Form 15, Information Required from Bidders.

3.8 **Substantial Completion**

Refer to Appendix C, Supplementary conditions, Section 1, Project Schedule.

*END OF SECTION*

## **SECTION IV – GENERAL TERMS AND CONDITIONS**

### **1.1 INTENT**

It is the policy of the City to encourage full and open competition among all available qualified vendors. All vendors regularly engaged in the type of Work specified in the Bid Solicitation are encouraged to submit bids. To receive notification and to be eligible to bid vendor should be registered with OpenGov. Vendors may register with the OpenGov (registration is free) to be included on a mailing list for selected categories of goods and Services. In order to be processed for payment, any awarded vendor must register with the City by completing and returning a Vendor Application and all supporting documents. For information and to apply as a vendor, please visit our website at [hollywoodfl.org](http://hollywoodfl.org) to download an application and submit it to the Office of Procurement and Contract Compliance.

It is the intent of the City of Hollywood, FL ("the City"), through this solicitation and the contract conditions contained herein, to establish to the greatest possible extent complete clarity regarding the requirements of both parties to the agreement resulting from this solicitation.

Before submitting a bid, the Vendor shall be thoroughly familiarized with all contract conditions referred to in this document and any addenda issued before the bid/proposal submission date. Such addenda shall form a part of the SOLICITATION and shall be made a part of the contract. It shall be the Vendor's responsibility to ascertain that the bid/proposal includes all addenda issued prior to the bid/proposal submission date. Addenda will be posted on the City's internet site along with the SOLICITATION.

The terms of the SOLICITATION and the selected Vendor's bid and any additional documentation (e.g. questions and answers) provided by the Vendor during the solicitation process will be integrated into the final contract for services entered into between the City and the selected Vendor. The Vendor shall determine, by personal examination and by such other means as may be preferred, the conditions and requirements under which the agreement must be performed.

### **1.2 PROPOSER'S RESPONSIBILITIES**

Proposers are required to submit their bids upon the following express conditions:

- A. Proposers shall thoroughly examine the drawings, specifications, schedules, instructions and all other contract documents.
- B. Proposers shall make all investigations necessary to thoroughly inform themselves regarding delivery of material, equipment or services as required by the SOLICITATION conditions. No plea of ignorance, by the proposer, of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the proposer to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation due the proposer.
- C. Proposers are advised that all City contracts are subject to all legal requirements provided for in the City of Hollywood Charter, Code of Ordinances and applicable County Ordinances, State Statutes and Federal Statutes.

### **1.3 PREPARATION OF BIDS/PROPOSALS**

Bids/proposals shall be prepared in accordance with the bid/proposal response format. Bids/proposals not complying with this format may be considered non-responsive and may be removed from consideration on this basis. Each proposer, by making a bid/proposal, represents that this document has been read and is fully understood.

Bids/proposals will be prepared in accordance with the following:

- A. The City's enclosed bid/proposal Forms, in their entirety, are to be used in submitting your bid/proposal. **NO OTHER FORM WILL BE ACCEPTED.**
- B. All information required by the bid/proposal form shall be furnished. The proposer shall sign each continuation sheet (where indicated) on which an entry is made.

C. Prices shall be shown and where there is an error in extension of prices, the unit price shall govern.

The City of Hollywood is exempt from payment to its vendors of State of Florida sales tax and, therefore, such taxes should not be figured into the SOLICITATION. However, this exemption does not apply to suppliers to the City in their (supplier) purchases of goods or services, used in work or goods supplied to the City. Proposers are responsible for any taxes, sales or otherwise, levied on their purchases, subcontracts, employment, etc. An exemption certificate will be signed where applicable, upon request. The City will pay no sales tax.

#### **1.4 DESCRIPTION OF SUPPLIES (As Applicable)**

Any manufacturer's names, trade names, brand names, or catalog numbers used in these applications are for the purpose of describing and establishing minimum requirements or level of quality, standards of performance, and design required, and are in no way intended to prohibit the bidding of other manufacturers' items of equal material, unless specifications state "NO SUBSTITUTIONS."

Proposers must indicate any variances to the specifications, terms, and conditions, no matter how slight. If variations are not stated in the bid/proposal, it shall be construed that the bid/proposal fully complies with the Specifications, Terms and Conditions.

Proposers are required to state exactly what they intend to furnish; otherwise they shall be required to furnish the items as specified.

Proposers will submit, with their bid/proposal, necessary data (factory information sheets, specifications, brochures, etc.) to evaluate and determine the quality of the item(s) they are proposing.

The City shall be the sole judge of equality and its decision shall be final.

#### **1.5 ADDENDA**

The The Office of Procurement and Contract Compliance may issue an addendum in response to any inquiry received, prior to bid/proposal opening, which changes, adds to or clarifies the terms, provisions or requirements of the solicitation. The Proposer should not rely on any representation, statement or explanation, whether written or verbal, other than those made in this solicitation document or in any addenda issued. Where there appears to be a conflict between this solicitation and any addendum, the last addendum issued shall prevail. It is the proposer's responsibility to ensure receipt of all addenda and any accompanying documents. Proposer(s) shall acknowledge receipt of any formal Addenda by signing the addendum and including it with their bid/proposal. Failure to include signed formal addenda in its bid/proposal shall cause the City to deem the bid/proposal non-responsive provided, however, that the City may waive this requirement in its best interest.

#### **1.6 REJECTION OF BIDS/PROPOSALS**

To the extent permitted by applicable state and federal laws and regulations, the City reserves the right to reject any and all bids/proposals, to waive any and all informalities, irregularities and technicalities not involving price, time or changes in the commodities and/or services, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional bids/proposals. Bids/proposals will be considered irregular and may be rejected if they show serious omissions, alterations in form, additions not called for, conditions or unauthorized alterations or irregularities of any kind.

The City also reserves the right to waive minor technical defects in a bid/proposal. The City reserves the right to determine, in its sole discretion, whether any aspect of a bid/proposal satisfies the criteria established in this Solicitation.

The City reserves the right to reject, in whole or in part, the bid/proposal of any Proposer if the City believes that it would not be in the best interest of the City to make an award to that Proposer, whether because the bid/proposal is not responsive or the Proposer is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criterion established by City.

The foregoing reasons for rejection of bids/proposals are not intended to be exhaustive.

The City may reject a bid/proposal if:

A. The Proposer fails to acknowledge receipt of an addendum, or if

- B. The Proposer misstates or conceals any material fact in the bid/proposal, or if
- C. The bid/proposal does not strictly conform to the law or requirements of the SOLICITATION, or if
- D. The City is under a pre- lawsuit claim or current litigation with the proposer.

Additionally, any one of the following causes (not limited to) may be considered as sufficient justification to disqualify a Bidder and reject his/her Bid:

- A. Submission of more than one Bid for the same work by an individual, firm, partnership or corporation under the same or different names.
- B. Evidence of collusion.
- C. Previous participation in collusive Bidding on work for the City of Hollywood, Florida.
- D. Submission of an unbalanced Bid in which the prices Bid for some items are out of proportion to the prices Bid for other items.
- E. Lack of competency. The Engineer may declare any Bidder ineligible, at any time during the process or receiving Bids or awarding the Contract, if developments arise which, in his opinion, adversely affects the Bidder's responsibility. The Bidder will be given an opportunity, by the Engineer, to present additional evidence before final action is taken.
- F. Lack of responsibility as shown by past work judged by the Engineer from the standpoint of workmanship and progress.
- G. Uncompleted work for which the Bidder is committed by Contract, which is in the judgment of the Engineer, might hinder or prevent the prompt completion of work under this Contract

The City may reject all bids whenever it is deemed in the best interest of the City to do so, and may reject any part of a bid unless the bid has been qualified as provided in herein.

#### **1.7 WITHDRAWAL OF BIDS**

- A. Bids may not be withdrawn and shall be deemed enforceable for a period of 180 days after the time set for the SOLICITATION opening.
- B. Bids may be withdrawn prior to the time set for the SOLICITATION opening. Such request must be in writing.
- C. The City will permanently retain as liquidated damages and the bid deposit furnished by any Bidder who requests to withdraw a bid after the SOLICITATION opening.

#### **1.8 BIDS TO REMAIN OPEN**

All bids shall remain open for 180 calendar days after the day of the bid opening, but the City may, at its sole discretion, release any bid and return the bid Security prior to that date.

Extensions of time when bids shall remain open beyond the 180 day period may be made only by mutual written agreement between the City, the successful Bidder and the surety, if any, for the successful Bidder.

#### **1.9 LATE BIDS OR MODIFICATIONS**

Only bids received as of the opening date and time will be considered timely. Bids and modifications received after the time set for the opening will be returned un-opened to the sender and rejected as late.

#### **1.10 CONFLICTS WITHIN THE SOLICITATION**

Where there appears to be a conflict between the General Terms and Conditions, Special Conditions, the Technical Specifications, the SOLICITATION Submittal Section, or any addendum issued, the order of precedence shall be the last addendum issued, the SOLICITATION Submittal Section, the Technical Specifications, the Special Conditions, and then the General Terms and Conditions.

#### **1.11 CLARIFICATION OR OBJECTION TO BID SPECIFICATIONS**

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of the specifications or other SOLICITATION documents or any part thereof, they may submit requests for clarification to the The Office of Procurement and Contract Compliance on or before the date specified for a request for clarification. All such requests for clarification shall be made in writing and the person submitting the request will be responsible for its prompt delivery. Any interpretation of the SOLICITATION, if made, will be made only by Addendum duly issued. A copy of such Addendum will be made available to each person receiving a Solicitation. The City will not be responsible for any other explanation or interpretation of the SOLICITATION given prior to the award of the contract. Any objection to the specifications and requirements as set forth in this SOLICITATION must be filed in writing with the Chief Procurement Officer on or before the date specified for a request for clarification.

#### **1.12 COMPETENCY OF PROPOSERS**

Pre-award inspection of the Bidder's facility may be made prior to the award of a contract. Bids will be considered only from firms which are regularly engaged in the business of providing the goods and/or services as described in this SOLICITATION(s); have a record of performance for a reasonable period of time; and have sufficient financial support, equipment and organization to ensure that they can satisfactorily deliver the material and/or services if awarded a Contract under the terms and conditions herein stated. The terms "equipment and organization" as used herein shall be construed to mean a fully equipped and well established company in line with the best business practices in the industry and as determined by the proper authorities of the City.

The City may consider any evidence available to it of the financial, technical and other qualifications and abilities of a proposer, including past performance (experience) in making the award in the best interest of the City. In all cases the City of Hollywood shall have no liability to any proposer for any costs or expense incurred in connection with this SOLICITATION or otherwise.

#### **1.13 QUALIFICATIONS OF PROPOSERS**

No Bid will be accepted from, nor will any contract be awarded to any person who is in arrears to the City upon any debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to City, or who is deemed responsible or unreliable by the City.

As part of the bid evaluation process, City may conduct a background investigation including a record check by the Hollywood Police Department. Proposer's submission of a bid constitutes acknowledgment of the process and consent to such investigation. City shall be the sole judge in determining a Bidder's qualifications.

#### **1.14 CONSIDERATION OF BIDS**

In cases where an item requested is identified by a manufacturer's name, trade name, catalog number, or reference, it is understood that the Vendor proposes to furnish the item so identified and does not propose to furnish an "equal" unless the proposed "equal" is pre-approved by the City.

References to any of the above are intended to be descriptive but not restrictive and only indicate articles that will be satisfactory. A bid of an "equal" will be considered, provided that the Vendor states in his bid exactly what he proposes to furnish, including sample, illustration, or other descriptive matter which will clearly indicate the character of the article covered by such bid. The designated City representative hereby reserves the right to approve as an "equal", or to reject as not being an "equal", any article proposed which contains major or minor variations from specifications requirements.

#### **1.15 AWARD OF CONTRACT**

If the Contract is to be awarded, it will be awarded, after evaluation by the City, to the responsible and responsive Proposer whom the City determines will be in the best interests of the City and not necessarily to the lowest cost Proposer. Proposers may be invited to an oral interview before the committee. A short list of finalists will be determined and presented to either the City Manager or his/her designee or to the City Commission, in accordance with the applicable City of Hollywood Code of Ordinances, and will make the final ranking for the purposes of negotiating a contract with the top ranked firm. The successful Proposer shall be required to sign a negotiated contract; the refusal or failure of a successful Proposer to execute a contract which contains the mandatory material terms and conditions contained in the SOLICITATION, shall be grounds for deeming the Proposer and/or the Proposer's bid/proposal non-responsive.

If applicable, the Proposer to whom award is made shall execute a written contract prior to award by the City Commission. If the Proposer to whom the first award is made fails to enter into a contract as herein provided, the Contract may be let to the next highest ranked Proposer who is responsible and responsive in the opinion of the City.

#### **1.16 BASIS FOR AWARD, EVALUATION CRITERIA AND QUESTIONS**

The qualification of bid/proposal responders on this project will be considered in making the award. The City is not obligated to accept any bid/proposal if deemed not in the best interest of the City to do so. The City shall make award to a qualified proposer based on fees submitted and responses to this SOLICITATION.

Failure to include in the bid all information outlined herein may be cause for rejection of the bid.

The City reserves the right to accept or reject any and all bids, in whole or in part, as determined to be in the best interest of the City in its sole discretion.

The City reserves the right to waive any informalities or irregularities in bids.

The City reserves the right to negotiate separately the terms and conditions or all or any part of the bids as deemed to be in the City's best interest in its sole discretion.

Information and/or factors gathered during interviews, negotiations and any reference checks, and any other information or factors deemed relevant by the City, shall be utilized in the final award. The final award of a contract is subject to approval by the City Commission.

#### **1.17 AGREEMENT**

An agreement shall be sent to the awarded proposer to be signed, witnessed, and returned to the City for execution. The City will provide a copy of the fully executed agreement to the awarded proposer.

#### **1.18 NOTICE TO PROCEED**

A signed purchase order, blanket purchase order or fully executed agreement will be the Proposer's authorization to proceed and may substitute for a "Notice to Proceed" form.

#### **1.19 BID PROTESTS**

The City shall provide notice of its intent to award or reject to all Proposers by posting such notice on the City's website.

After a notice of intent to award a contract is posted, any actual or prospective proposer who is aggrieved in connection with the pending award of the contract or any element of the process leading to the award of the contract may protest to the Director of Procurement Services. A protest must be filed within five business days after posting or any right to protest is forfeited. The protest must be in writing, must identify the name and address of the protester, and must include a factual summary of, and the basis for, the protest. Filing shall be considered complete when the protest, including a deposit, is received by the The Office of Procurement and Contract Compliance. Failure to file a protest within the time-frame specified herein shall constitute a full waiver of all rights to protest the City's decision regarding the award.

The written protest shall state in detail the specific facts and law or ordinance upon which the protest of the proposed award is based, and shall include all pertinent documents.

A written protest may not challenge the relative weight of evaluation criteria or a formula for assigning points.

Upon receipt of a formal written protest, the City shall stop award proceedings until resolution of the protest; unless it has been determined that the award of the contract without delay is necessary to protect substantial interests of the City.

Any and all costs incurred by a protesting party in connection with a bid protest shall be the sole responsibility of the protesting party.

Upon receipt of a protest of the pending award of a contract, a copy of the protest shall promptly be forwarded to the City Attorney. The City Attorney shall thereupon review the charge to determine its sufficiency, including whether the protest was timely filed. If upon review the City Attorney determines that the charge is insufficient, the City Attorney may issue a

summary dismissal of the protest. If upon review the City Attorney determines that the charge is sufficient, a hearing of the protest committee shall be scheduled.

A protest committee shall have the authority to review, settle and resolve the protest. The committee shall consist of three members appointed by the City Manager. The committee's review shall be informal.

If the protest committee determines that the pending award of a contract or any element of the process leading to the award involved a significant violation of law or applicable rule or regulation, all steps necessary and proper to correct the violation shall be taken. If the committee determines that the protest is without merit,

The Director shall promptly issue a decision in writing stating the reason for the decision and furnish a copy to the protester and any other interested party, and the process leading to the award shall proceed.

## **1.20 REQUIREMENTS FOR SIGNING BIDS/PROPOSALS**

Requirements for Signing Bid/Proposal:

- A. The bid/proposal must be signed in ink by an individual authorized to legally bind the person, partnership, company, or corporation submitting the bid/proposal. In cases where the bid/proposal is signed by a deputy or subordinate, the principal's proper written grant of authority to such deputy or subordinate must accompany the bid/proposal.
- B. Bids/proposals by corporations must be executed in the corporate name by the President or other corporate officers accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown below the signature.
- C. Bids/proposals by partnerships must be executed in the partnership name and signed by a general partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- D. All manual signatures must have the name typed directly under the line of the signature
- E. The above requirements apply to all SOLICITATION addenda.

## **1.21 EXAMINATION OF BID DOCUMENTS**

Before submitting a bid, each Bidder must: examine the bid Documents thoroughly; consider federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress, performance, or provision of the commodities and/or services; study and carefully correlate Proposer's observations with the bid Documents, and notify the City's agent of all conflicts, errors and discrepancies in the bid Documents.

The submission of a bid/proposal will constitute an incontrovertible representation by the Bidder, that the Bidder has complied with every requirement of this SOLICITATION, that without exception, the bid is premised upon performing the services and/or furnishing the commodities and materials in accordance with such means, methods, techniques, sequences or procedures as may be indicated in or required by the bid/proposal Documents, and that the bid Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of performance and furnishing of the goods and/or services.

## **1.22 PUBLIC RECORDS LAW**

If applicable, for each public agency contract for services, the Proposer is required to comply with F.S. 119.0701, which includes the following:

- A. Keep and maintain public records that ordinarily and necessarily would be required by the public agency in order to perform the service.
- B. Provide the public with access to public records on the same terms and conditions that the public agency would provide the records and at a cost that does not exceed the cost provided in F.S. Chapter 119 or as otherwise provided by law.

- C. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
- D. Meet all requirements for retaining public records and transfer, at no cost, to the public agency, all public records in possession of the proposer upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the public agency in a format that is compatible with the information technology systems of the public agency.

Public records may be inspected and examined by anyone desiring to do so, at a reasonable time, under reasonable conditions, and under supervision by the custodian of the public record. Sealed Bids become subject to the public records disclosure requirements of F.S. Chapter 119, notwithstanding a proposers' request to the contrary, at the time the City provides notice of a decision or intended decision, or 30 days after the bid/proposal opening, whichever is earlier.

Financial statements submitted in response to a request by the City may be confidential and exempt from disclosure.

Data processing software obtained under a licensing agreement which prohibits its disclosure may also exempt.

Proposers are hereby notified and agree that all information submitted as part of, or in support of SOLICITATION submittals will be available for public inspection after opening of SOLICITATION in compliance with Chapter 119 of the Florida Statutes. The proposer shall not, unless required as part of this SOLICITATION, submit any information in response to this invitation which the proposer considers to be a trade secret, proprietary or confidential. The submission, not required as part of this this SOLICITATION, of any information to the City in connection with this invitation shall be deemed conclusively to be a waiver of any trade secret or other protection, which would otherwise be available to the proposer.

### **1.23 INFORMATION**

For information concerning procedure for responding to this Solicitation (SOLICITATION), contact the Point of Contact in the Section 1.4. Such contact shall be for clarification purposes only. **It is preferred that all other questions be submitted in writing via OpenGov at least 10 calendar days prior to the bid/proposal due/opening date.**

### **1.24 N/A – INTENTIONALLY OMITTED**

### **1.25 MODIFICATION AND WITHDRAWAL OF BIDS/PROPOSALS**

Bids must be modified or withdrawn by an appropriate document duly executed in the manner that a bid must be executed and delivered to the place where bids are to be submitted at any time prior to the deadline for submitting bids. A request for withdrawal or a modification must be in writing and signed by a person duly authorized to do so and, in a case where signed by a deputy or subordinate, the principal's proper written grant of authority to such deputy or subordinate must accompany the request for withdrawal or modification. Withdrawal of a bid will not prejudice the rights of a Bidder to submit a new bid prior to the bid date and time. Except where provided in the following paragraph no bid may be withdrawn or modified after expiration of the period for receiving bids.

If, within twenty-four (24) hours after bids are opened, any Bidder files a duly signed written notice with the City and within five (5) calendar days thereafter demonstrates to the reasonable satisfaction of the City by clear and convincing evidence that there was a material and substantial mistake in the preparation of its bid, or that the mistake is clearly evident on the face of the bid but the intended correct bid is not similarly evident, then the Bidder may withdraw its bid and the bid Security will be returned.

### **1.26 N/A – INTENTIONALLY OMITTED**

### **1.27 OPEN END CONTRACT**

No guarantee is expressed or implied as to the total quantity of commodities/services to be purchased under any open end contract. Estimated quantities will be used for bid comparison purposes only. The City reserves the right to issue purchase orders as and when required, or a blanket purchase order and release partial quantities as and when required or any combination of the preceding.

ORDERING: The CITY reserves the right to purchase commodities/services specified herein through Contracts established by other governmental agencies or through separate procurement actions due to unique or special needs. If an urgent

delivery is required within a period shorter than the delivery time specified in the contract, and if the seller is unable to comply therewith, the City reserves the right to obtain such delivery from others without penalty or prejudice to the City or to the Bidder.

### **1.28 AUDIT RIGHTS**

The City reserves the right to audit the records of the successful Bidder for the commodities and/or services provided under the Contract at any time during the performance and term of the Contract and for a period of three (3) years after completion and acceptance by the City. If required by the City, the successful Bidder agrees to submit to an audit by an independent certified public accountant selected by the City. The successful Bidder shall allow the City to inspect, examine and review the records of the successful Bidder in relation to this contract at any and all times during normal business hours during the term of the Contract.

### **1.29 LOCAL, STATE AND FEDERAL COMPLIANCE REQUIREMENTS**

The Bidder shall comply with all local, state and federal directives, orders and laws as applicable to this SOLICITATION and subsequent contract(s) including, but not limited to:

- A. Equal Employment Opportunity (EEO), in compliance with Executive Order 11246 as amended and applicable to this contract.
- B. All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended, and be in compliance with Chapter 442, Florida Statutes. Any toxic substance listed in Section 38F-41.03 of the Florida Administrative Code delivered as a result of this order must be accompanied by a completed Material Safety Data Sheet (MSDS).
- C. The Immigration and Nationality Act prohibits (i) the employment of an unauthorized alien when the employer knows the individual is an unauthorized alien and (ii) the employment of an individual without complying with the requirements of the federal employment verification system. If a proposer commits either of these violations, such violation shall be cause for unilateral cancellation of the contract.
- D. This Section applies only to any contract for goods or services of \$1 million or more: The Proposer certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and that it does not have business operations in Cuba or Syria as provided in section 287.135, Florida Statutes (2011), as may be amended or revised. The City may terminate this Contract at the City's option if the Proposer is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2011), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or has engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2011), as may be amended or revised.

### **1.30 FRAUD AND MISREPRESENTATION**

Any individual, corporation or other entity that attempts to meet its contractual obligations with the City through fraud, misrepresentation or material misstatement, may be debarred from doing business with the City. The City as further sanction may terminate or cancel any other contracts with such individual, corporation or entity. Such individual or entity shall be responsible for all direct or indirect costs associated with termination or cancellation, including attorney's fees.

### **1.31 DEBARRED OR SUSPENDED BIDDERS**

The bidder certifies, by submission of a response to this solicitation, that neither it nor its principals and sub bidder are presently debarred or suspended by any Federal department or agency.

### **1.32 COLLUSION**

More than one bid/proposal received for the same work from an individual, firm, partnership, corporation or association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one bid for the same work will cause the rejection of such bid which the Bidder is interested. If there are reasonable grounds for believing that collusion exists among the Bidder, the bids of participants in such collusion will not be considered.

### **1.33 COPELAND "ANTI-KICKBACK"**

The Bidder and all sub bidders will comply with the Copeland Anti-Kickback Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).

### **1.34 FORCE MAJEURE**

The Agreement which is awarded to the successful proposer may provide that the performance of any act by the City or Bidder hereunder may be delayed or suspended at any time while, but only so long as, either party is hindered in or prevented from performance by acts of God, the elements, war, rebellion, strikes, lockouts or any cause beyond the reasonable control of such party, provided however, the City shall have the right to provide substitute service from third parties or City forces and in such event the City shall withhold payment due the Bidder for such period of time. If the condition of force majeure exceeds a period of 14 days the City may, at its option and discretion, cancel or renegotiate this Agreement.

### **1.35 PUBLIC ENTITY CRIMES**

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 of real property to a public entity, may not be awarded or perform work as a Bidder, supplier, sub bidder, 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 Florida Statutes, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

### **1.36 DRUG-FREE WORKPLACE PROGRAM**

Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, 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 of the tied vendors have a drug-free workplace program.

### **1.37 SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY**

Bidder shall sign and submit the attached form indicating understanding and compliance with the City's and State's policies prohibiting solicitation and acceptance of gifts by public officers, employees and candidates. Failure to submit the signed form will result in your bid being declared non-responsive; provided, however, that a responsible Bidder whose bid would be responsive but for the failure to submit the signed form in its bid may be given the opportunity to submit the form to the City within five calendar days after notification by the City, if this is determined to be in the best interest of the City.

### **1.38 CONFLICT OF INTEREST**

The Bidder represents that:

No officer, director, employee, agent, or other consultant of the City or a member of the immediate family or household of the aforesaid has directly or indirectly received or been promised any form of benefit, payment or compensation, whether tangible or intangible, in connection with the grant of this Agreement.

There are no undisclosed persons or entities interested with the Proposer in this Agreement. This Agreement is entered into by the Proposer without any connection with any other entity or person making a bid Bidder for the same purpose, and without collusion, fraud or conflict of interest. No elected or appointed officer or official, director, employee, agent or other consultant of the City, or of the State of Florida (including elected and appointed members of the legislative and executive branches of government), or member of the immediate family or household of any of the aforesaid:

1. Is interested on behalf of or through the Bidder directly or indirectly in any manner whatsoever in the execution or the performance of this Agreement, or in the services, supplies or work, to which this Agreement relates or in any portion of the revenues; or

2. Is an employee, agent, advisor, or consultant to the Proposer or to the best of the Proposer's knowledge, any sub bidder or supplier to the Bidder.

Neither the Bidder nor any officer, director, employee, agent, parent, subsidiary, or affiliate of the Bidder shall have an interest which is in conflict with the Bidder's faithful performance of its obligations under this Agreement; provided that the City, in its sole discretion, may consent in writing to such a relationship, and provided the Bidder provides the City with a written notice, in advance, which identifies all the individuals and entities involved and sets forth in detail the nature of the relationship and why it is in the City's best interest to consent to such relationship.

The provisions of this Article are supplemental to, not in lieu of, all applicable laws with respect to conflict of interest. In the event there is a difference between the standards applicable under this Agreement and those provided by statute, the stricter standard shall apply.

In the event the Bidder has no prior knowledge of a conflict of interest as set forth above and acquires information which may indicate that there may be an actual or apparent violation of any of the above, the Bidder shall promptly bring such information to the attention of the City's ENGINEER. The Bidder shall thereafter cooperate with the City's review and investigation of such information, and comply with the instructions the Bidder receives from the ENGINEER in regard to remedying the situation.

### **1.39 DISCRIMINATION**

Any entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a proposer, supplier, sub bidder, or consultant under contract with any public entity, and may not transact business with any public entity.

### **1.40 ADVICE OF OMISSION OR MISSTATEMENT**

In the event it is evident to a Vendor responding to this SOLICITATION that the City has omitted or misstated a material requirement to this SOLICITATION and/or the services required by this SOLICITATION, the responding Vendor shall advise the contact identified in the SOLICITATION Clarifications and Questions section above of such omission or misstatement.

### **1.41 CONFIDENTIAL INFORMATION**

Information contained in the Vendor's bid that is company confidential must be clearly identified in the bid/proposal itself. The City will be free to use all information in the Vendor's bid for the City's purposes, in accordance with State Law. Vendor bids shall remain confidential for 30 days or until a notice of intent to award is posted, which is sooner. The Vendor understands that any material supplied to the City may be subject to public disclosure under the Public Records Law.

### **1.42 GOVERNING LAW**

This Contract, including appendices, and all matters relating to this Contract (whether in contract, statute, tort (such as negligence), or otherwise) shall be governed by, and construed in accordance with, the laws of the State of Florida. This shall apply notwithstanding such factors which include, but are not limited to, the place where the contract is entered into, the place where the accident occurs and notwithstanding application of conflicts of law principles.

### **1.43 LITIGATION VENUE**

The parties waive the privilege of venue and agree that all litigation between them in the state courts shall take place in Broward County, Florida and that all litigation between them in the federal courts shall take place in the Southern District of Florida.

### **1.44 SOVEREIGN IMMUNITY**

Nothing in this agreement shall be interpreted or construed to mean that the city waives its common law sovereign immunity or the limits of liability set forth in Section 768.28, Florida Statute.

#### **1.45 SURVIVAL**

The parties acknowledge that any of the obligations in this Agreement will survive the term, termination and cancellation hereof. Accordingly, the respective obligations of the Proposer and the City under this Agreement, which by nature would continue beyond the termination, cancellation or expiration thereof, shall survive termination, cancellation or expiration hereof.

#### **1.46 INDEMNIFICATION AND HOLD HARMLESS AGREEMENT**

The Contractor shall indemnify and hold harmless the City of Hollywood and its officers, employees, agents and instrumentalities from any and all liability, losses or damages. In addition, the City shall be entitled to attorney's fees and costs of defense, which the City of Hollywood, or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this project by the awarded Bidder or its employees, agents, servants, partners, principals or subcontractors. Furthermore, the awarded Bidder shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind of nature in the name of the City of Hollywood, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. The awarded Bidder expressly understands and agrees that any insurance protection required by the resulting agreement or otherwise provided by the awarded Bidder shall cover the City of Hollywood, its officers, employees, agents and instrumentalities and shall include claims for damages resulting from and/or caused by the negligence, recklessness or intentional wrongful misconduct of the Contractor and persons employed by or utilized by the Contractor in the performance of the contract.

#### **1.47 PATENT AND COPYRIGHT INDEMNIFICATION**

The Bidder warrants that all deliverables furnished hereunder, including but not limited to: services, equipment programs, documentation, software, analyses, applications, methods, ways, processes, and the like, do not infringe upon or violate any patent, copyrights, service marks, trade secret, or any other third party proprietary rights.

The Bidder shall be liable and responsible for any and all claims made against the City for infringement of patents, copyrights, service marks, trade secrets or any other third party proprietary rights, by the use or supplying of any programs, documentation, software, analyses, applications, methods, ways, processes, and the like, in the course of performance or completion of, or in any way connected with, the work, or the City's continued use of the deliverables furnished hereunder. Accordingly, the Bidder, at its own expense, including the payment of attorney's fees, shall indemnify, and hold harmless the City and defend any action brought against the City with respect to any claim, demand, and cause of action, debt, or liability.

In the event any deliverable or anything provided to the City hereunder, or a portion thereof, is held to constitute an infringement and its use is or may be enjoined, the Bidder shall have the obligation, at the City's option, to (i) modify, or require that the applicable sub bidder or supplier modify, the alleged infringing item(s) at the Bidder's expense, without impairing in any respect the functionality or performance of the item(s), or (ii) procure for the City, at the Bidder's expense, the rights provided under this Agreement to use the item(s).

The Bidder shall be solely responsible for determining and informing the City whether a prospective supplier or sub bidder is a party to any litigation involving patent or copyright infringement, service mark, trademark, violation, or proprietary rights claims or is subject to any injunction which may prohibit it from providing any deliverable hereunder. The Bidder shall enter into agreements with all suppliers and sub bidder at the Bidder's own risk. The City may reject any deliverable that it believes to be the subject of any such litigation or injunction, or if, in the City's judgment, use thereof would delay the work or be unlawful.

The Bidder shall not infringe any copyright, trademark, service mark, trade secrets, patent rights, or other intellectual property rights in the performance of the work.

#### **1.48 ADVERTISING**

Vendor shall not advertise or publish the fact that the City has placed this order without prior written consent from the City, except as may be necessary to comply with a proper request for information from an authorized representative of a governmental unit or agency.

#### **1.49 DISCLAIMER**

The Hollywood may, in its sole discretion, accept or reject, in whole or in part, for any reason whatsoever any or all bids; re-advertise this SOLICITATION, postpone or cancel at any time this SOLICITATION process; or, waive any formalities of or irregularities in the bid process. Bids that are not submitted on time and/or do not conform to the City of Hollywood's requirements will not be considered. After all bids are analyzed, organization(s) submitting bid that appear, solely in the opinion of the City of Hollywood, to be the most competitive, shall be submitted to the City of Hollywood's City Commission, and the final selection will be made shortly thereafter with a timetable set solely by the City of Hollywood. The selection by the City of Hollywood shall be based on the bid, which is, in the sole opinion of the City Commission of the City of Hollywood, in the best interest of the City of Hollywood. The issuance of this SOLICITATION constitutes only an invitation to make a bid to the City of Hollywood. The City of Hollywood reserves the right to determine, in its sole discretion, whether any aspect of the bid satisfies the criteria established by the City. In all cases the City of Hollywood shall have no liability to any proposer for any costs or expense incurred in connection with this bid or otherwise.

#### **1.50 TRADEMARKS**

The City warrants that all trademarks the City requests the Vendor to affix to articles purchased are those owned by the City and it is understood that the Vendor shall not acquire or claim any rights, title, or interest therein, or use any of such trademarks on any articles produced for itself or anyone other than the City.

#### **1.51 RIGHT TO REQUEST ADDITIONAL INFORMATION**

The City reserves the right to request any additional information that might be deemed necessary during the evaluation process.

#### **1.52 BID PREPARATION COSTS**

The Vendor is responsible for any and all costs incurred by the Vendor or his/her sub bidders in responding to this solicitation.

#### **1.53 DESIGN COSTS (N/A)**

#### **1.54 ADDITIONAL CHARGES**

No additional charges, other than those listed on the price breakdown sheets, shall be made. Prices quoted will include verification/coordination of order, all costs for shipping, delivery to all sites, unpacking, setup, installation, operation, testing, cleanup, training and Vendor travel charges.

#### **1.55 RIGHTS TO PERTINENT MATERIALS**

All responses, inquires, and correspondence relating to this SOLICITATION and all reports, charts, displays, schedules, exhibits and other documentation produced by the Vendor that are submitted as part of the bid shall become the property of the City upon receipt, a part of a public record upon opening, and will not be returned.

#### **1.56 INSURANCE REQUIREMENTS**

See insurance requirements in the main solicitation document.

#### **1.57 NATURE OF THE AGREEMENT**

The Agreement incorporates and includes all negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained in the Agreement. The parties agree that there are no commitments, agreements, or understandings concerning the subject matter of the Agreement that are not contained in the Agreement, and that the Agreement contains the entire agreement between the parties as to all matters contained herein. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written. It is further agreed that any oral representations or modifications concerning this Agreement shall be of no force or effect, and that the Agreement may be modified, altered or amended only by a written amendment duly executed by both parties hereto or their authorized representatives.

The Bidder shall provide the services set forth in the Scope of Services, and render full and prompt cooperation with the City in all aspects of the services performed hereunder.

The Bidder acknowledges that the Agreement requires the performance of all things necessary for or incidental to the effective and complete performance of all work and services under this Contract. All things not expressly mentioned in the Agreement but necessary to carrying out its intent are required by the Agreement, and the Bidder shall perform the same as though they were specifically mentioned, described and delineated.

The Bidder shall furnish all labor, materials, tools, supplies, and other items required to perform the work and services that are necessary for the completion of this Contract. All work and services shall be accomplished at the direction of and to the satisfaction of the City's ENGINEER.

The Bidder acknowledges that the City shall be responsible for making all policy decisions regarding the Scope of Services. The Proposer agrees to provide input on policy issues in the form of recommendations.

The Bidder agrees to implement any and all changes in providing services hereunder as a result of a policy change implemented by the City. The Bidder agrees to act in an expeditious and fiscally sound manner in providing the City with input regarding the time and cost to implement said changes and in executing the activities required to implement said changes

#### **1.58 AUTHORITY OF THE CITY'S ENGINEER**

The Bidder hereby acknowledges that the City's ENGINEER will determine in the first instance all questions of any nature whatsoever arising out of, under, or in connection with, or in any way related to or on account of, this Agreement including without limitations: questions as to the value, acceptability and fitness of the services; questions as to either party's fulfillment of its obligations under the Contract; negligence, fraud or misrepresentation before or subsequent to acceptance of the Bid; questions as to the interpretation of the Scope of Services; and claims for damages, compensation and losses.

The Bidder shall be bound by all determinations or orders and shall promptly obey and follow every order of the ENGINEER, including the withdrawal or modification of any previous order and regardless of whether the Bidder agrees with the ENGINEER's determination or order. Where orders are given orally, they will be issued in writing by the ENGINEER as soon thereafter as is practicable.

The Bidder must, in the final instance, seek to resolve every difference concerning the Agreement with the ENGINEER. In the event that the ENGINEER and the Bidder are unable to resolve their difference, the Bidder may initiate a dispute in accordance with the procedures set forth in the section below. Exhaustion of these procedures shall be a condition precedent to any lawsuit permitted hereunder.

In the event of such dispute, the parties to this Agreement authorize the City Manager or designee, who may not be the ENGINEER or anyone associated with this Project, acting personally, to decide all questions arising out of, under, or in connection with, or in any way related to or on account of the Agreement (including but not limited to claims in the nature of breach of contract, fraud or misrepresentation arising either before or subsequent to execution hereof) and the decision of each with respect to matters within the City Manager's purview as set forth above shall be conclusive, final and binding on the parties. Any such dispute shall be brought, if at all, before the City Manager within 10 days of the occurrence, event or act out of which the dispute arises.

The City Manager may base this decision on such assistance as may be desirable, including advice of experts, but in any event shall base the decision on an independent and objective determination of whether the Bidder's performance or any deliverable meets the requirements of this Agreement and any specifications with respect thereto set forth herein. The effect of any decision shall not be impaired or waived by any negotiations or settlements or offers made in connection with the dispute, whether or not the City Manager participated therein, or by any prior decision of others, which prior decision shall be deemed subject to review, or by any termination or cancellation of the Agreement. All such disputes shall be submitted in writing by the Bidder to the City Manager for a decision, together with all pertinent information in regard to such questions, in order that a fair and impartial decision may be made. The parties agree that whenever the City Manager is entitled to exercise discretion or judgment or to make a determination or form an opinion pursuant to the provisions of this Article, such action shall be deemed fair and impartial when exercised or taken. The City Manager shall render a decision in writing and deliver a copy of the same to the Bidder. Except as such remedies may be limited or waived elsewhere in the Agreement, the Bidder reserves the right to pursue any remedies available under law after exhausting the provisions of this Article.

### **1.59 MUTUAL OBLIGATIONS**

This Agreement, including attachments and appendices to the Agreement, shall constitute the entire Agreement between the parties with respect hereto and supersedes all previous communications and representations or agreements, whether written or oral, with respect to the subject matter hereof unless acknowledged in writing by the duly authorized representatives of both parties.

Nothing in this Agreement shall be construed for the benefit, intended or otherwise, of any third party that is not a parent or subsidiary of a party or otherwise related (by virtue of ownership control or statutory control) to a party.

In those situations where this Agreement imposes an indemnity or defense obligation on the Bidder, the City may, at its expense, elect to participate in the defense if the City should so choose. Furthermore, the City may at its own expense defend or settle any such claims if the Bidder fails to diligently defend such claims, and thereafter seek indemnity for costs and attorney's fees from the Bidder.

### **1.60 SUBCONTRACTUAL RELATIONS**

If the Bidder will cause any part of this Agreement to be performed by a sub bidder, the provisions of this Contract will apply to such sub bidder and its officers, agents and employees in all respects as if it and they were employees of the Proposer; and the Proposer will not be in any manner thereby discharged from its obligations and liabilities hereunder, but will be liable hereunder for all acts and negligence of the sub bidder, its officers, agents, and employees, as if they were employees of the Proposer. The services performed by the sub bidder will be subject to the provisions hereof as if performed directly by the Bidder.

The Bidder, before making any subcontract for any portion of the services, will state in writing to the City the name of the proposed sub bidder, the portion of the services which the sub bidder is to do, the place of business of such sub bidder, and such other information as the City may require. The City will have the right to require the Bidder not to award any subcontract to a person, firm or corporation disapproved by the City.

Before entering into any subcontract hereunder, the Bidder will inform the sub bidder fully and completely of all provisions and requirements of this Agreement relating either directly or indirectly to the services to be performed. Such services performed by such sub bidder will strictly comply with the requirements of this Contract.

In order to qualify as a sub bidder satisfactory to the City, in addition to the other requirements herein provided, the sub bidder must be prepared to prove to the satisfaction of the City that it has the necessary facilities, skill and experience, and ample financial resources to perform the services in a satisfactory manner. To be considered skilled and experienced, the sub bidder must show to the satisfaction of the City that it has satisfactorily performed services of the same general type which are required to be performed under this Agreement.

The City shall have the right to withdraw its consent to a subcontract if it appears to the City that the subcontract will delay, prevent, or otherwise impair the performance of the Bidder's obligations under this Agreement. All sub bidder are required to protect the confidentiality of the City and City's proprietary and confidential information. The Bidder shall furnish to the City copies of all subcontracts between the Bidder and sub bidder and suppliers hereunder. Within each such subcontract, there shall be a clause for the benefit of the City permitting the City to request completion of performance by the sub bidder of its obligations under the subcontract, in the event the City finds the Bidder in breach of its obligations, and the option to pay the sub bidder directly for the performance by such sub bidder. The foregoing shall neither convey nor imply any obligation or liability on the part of the City to any sub bidder hereunder as more fully described herein.

### **1.61 PROMPT PAYMENT: LATE PAYMENTS BY BIDDER TO SUB BIDDER AND MATERIAL SUPPLIERS; PENALTY:**

When a Bidder receives from the City of Hollywood any payment for contractual services, commodities, materials, supplies, or construction contracts, the proposer shall pay such moneys received to each sub bidder and material supplier in proportion to the percentage of work completed by each sub bidder and material supplier at the time of receipt. If the Bidder receives less than full payment, then the proposer shall be required to disburse only the funds received on a pro rata basis to the sub bidder and materials Suppliers, each receiving a prorated portion based on the amount due on the payment. If the proposer without reasonable cause fails to make payments required by this section to sub bidder and material suppliers within fifteen (15) working days after the receipt by the Bidder of full or partial payment, the proposer shall pay to the sub bidder and material suppliers a penalty in the amount of one percent (1%) of the amount due, per month, from the expiration of the period allowed herein for payment. Such penalty shall be in addition to actual payments owed. Retainage is also subject to the prompt payment requirement and must be returned to the sub bidder or material

supplier whose work has been completed, even if the prime contract has not been completed. The Bidder shall include the above obligation in each subcontract it signs with a sub bidder or material supplier.

#### **1.62 TERMINATION FOR CONVENIENCE AND SUSPENSION OF WORK**

The City may terminate this Agreement if an individual or corporation or other entity attempts to meet its contractual obligation with the City through fraud, misrepresentation or material misstatement.

The City may, as a further sanction, terminate or cancel any other contract(s) that such individual or corporation or other entity has with the City. Such individual, corporation or other entity shall be responsible for all direct and indirect costs associated with such termination or cancellation, including attorney's fees.

The foregoing notwithstanding, any individual, corporation or other entity which attempts to meet its contractual obligations with the City through fraud, misrepresentation or material misstatement may be debarred from City contracting in accordance with the City debarment procedures. The Bidder may be subject to debarment for failure to perform and any other reasons related to the Bidder's breach or failure of satisfactory performance.

In addition to cancellation or termination as otherwise provided in this Agreement, the City may at any time, in its sole discretion, with or without cause, terminate this Agreement by written notice to the Bidder and in such event:

The Bidder shall, upon receipt of such notice, unless otherwise directed by the City:

1. Stop work on the date specified in the notice ("the Effective Termination Date");
2. Take such action as may be necessary for the protection and preservation of the City's materials and property;
3. Cancel orders;
4. Assign to the City and deliver to any location designated by the City any non-cancelable orders for deliverables that are not capable of use except in the performance of this Agreement and which have been specifically developed for the sole purpose of this Agreement and not incorporated in the services;
5. Take no action which will increase the amounts payable by the City under this Agreement.

In the event that the City exercises its right to terminate this Agreement pursuant to this Article, the Bidder will be compensated as stated in the payment articles herein, for the:

1. Portion of the services completed in accordance with the Agreement up to the Effective Termination Date; and
2. Non-cancelable deliverables that are not capable of use except in the performance of this Agreement and which have been specifically developed for the sole purpose of this Agreement but not incorporated in the services.

All compensation pursuant to this Article is subject to audit.

#### **1.63 EVENT OF DEFAULT**

An Event of Default shall mean a breach of this Agreement by the Bidder. Without limiting the generality of the foregoing and in addition to those instances referred to herein as a breach, an Event of Default, shall include the following:

1. The Bidder has not delivered deliverables on a timely basis;
2. The Bidder has refused or failed, except in any case for which an extension of time is provided, to supply enough properly skilled staff personnel;
3. The Bidder has failed to make prompt payment to sub bidder or suppliers for any services;

4. The Bidder has become insolvent (other than as interdicted by the bankruptcy laws), or has assigned the proceeds received for the benefit of the Bidder 's creditors, or the Bidder has taken advantage of any insolvency statute or debtor/creditor law or if the Bidder 's affairs have been put in the hands of a receiver;
5. The Bidder has failed to obtain the approval of the City where required by this Agreement;
6. The Bidder has failed to provide "adequate assurances" as required under subsection "B" below; and
7. The Bidder has failed in the representation of any warranties stated herein.

When, in the opinion of the City, reasonable grounds for uncertainty exist with respect to the Proposer's ability to perform the services or any portion thereof, the City may request that the Proposer, within the time frame set forth in the City's request, provide adequate assurances to the City, in writing, of the Proposer's ability to perform in accordance with terms of this Agreement. Until the City receives such assurances the City may request an adjustment to the compensation received by the Proposer for portions of the services which the Proposer has not performed. In the event that the Proposer fails to provide to the City the requested assurances within the prescribed time frame, the City may:

1. Treat such failure as a repudiation of this Agreement;
2. Resort to any remedy for breach provided herein or at law, including but not limited to, taking over the performance of the services or any part thereof either by itself or through others.

In the event the City shall terminate this Agreement for default, the City or its designated representatives may immediately take possession of all applicable equipment, materials, products, documentation, reports and data.

#### **1.64 REMEDIES IN THE EVENT OF DEFAULT**

If an Event of Default occurs, the Proposer shall be liable for all damages resulting from the default, including but not limited to:

- A. Lost revenues;
- B. The difference between the cost associated with procuring services hereunder and the amount actually expended by the City for procurement of services, including procurement and administrative costs; and,
- C. Such other damages that the City may suffer.

The Proposer shall also remain liable for any liabilities and claims related to the Proposer's default. The City may also bring any suit or proceeding for specific performance or for an injunction.

#### **1.65 BANKRUPTCY**

The City reserves the right to terminate this contract if, during the term of any contract the Proposer has with the City, the Proposer becomes involved as a debtor in a bankruptcy proceeding, or becomes involved in a reorganization, dissolution, or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of the Proposer under federal bankruptcy law or any state insolvency law.

#### **1.66 CANCELLATION FOR UNAPPROPRIATED FUNDS**

The obligation of the City for payment to a Proposer is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, **unless otherwise authorized by law.**

#### **1.67 VERBAL INSTRUCTIONS PROCEDURE**

No negotiations, decisions, or actions shall be initiated or executed by the Proposer as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Proposers, which are signed by a person designated as authorized to bind the Proposer, will be recognized by the City as duly authorized expressions on behalf of the Proposer.

#### **1.68 E-VERIFY**

Proposer acknowledges that the City may be utilizing the Proposer's services for a project that is funded in whole or in part by State funds pursuant to a contract between the City and a State agency. The Proposer shall be responsible for complying with the E-Verify requirements in the contract and using the U.S. Department of Homeland Security's E-Verify system to verify the employment of all new employees hired by the Proposer during the Agreement term. The Proposer is also responsible for e-verifying its bidders, if any, pursuant to any agreement between the City and a State Agency, and reporting to the City any required information. The Proposer acknowledges that the terms of this paragraph are material terms, the breach of any of which shall constitute a default under this Agreement.

#### **1.69 BUDGETARY CONSTRAINTS**

In the event the City is required to reduce contract costs due to budgetary constraints, all services specified in this document may be subject to a permanent or temporary reduction in budget. In such an event, the total cost for the affected service shall be reduced as required. The Proposer shall also be provided with a minimum 30-day notice prior to any such reduction in budget.

#### **1.70 COST ADJUSTMENTS (As Applicable)**

The cost for all items as quoted herein shall remain firm for the first term of the contract. Costs for subsequent years and any extension term years shall be subject to an adjustment only if increases occur in the industry. However, unless very unusual and significant changes have occurred in the industry, such increases shall not exceed 3% per year or, whichever is less, the latest yearly percentage increase in the All Urban Consumers Price Index (CPU-U) (National) as published by the Bureau of Labor Statistics, U.S. Dept. of Labor. The yearly increase or decrease in the CPI shall be that latest index published and available ninety (90) days prior to the end of the contract year than in effect compared to the index for the same month one year prior. Any requested cost increase shall be fully documented and submitted to the City at least ninety (90) days prior to the contract anniversary date. Any approved cost adjustments shall become effective upon the anniversary date of the contract. In the event the CPI or industry costs decline, the City shall have the right to receive from the Proposer a reduction in costs that reflects such cost changes in the industry. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the contract can be cancelled by the City upon giving thirty (30) days written notice to the Proposer.

#### **1.71 OSHA STANDARDS**

Proposer acknowledges and agrees that as Contractor for the City of Hollywood, Florida, within the limits of the City of Hollywood, Florida, will have the sole responsibility for compliance with all requirements of the Federal Occupational Safety and Health Act of 1970, and all State and local safety and health regulations, and agrees to defend, indemnify and hold harmless the City of Hollywood, Florida, its officials, employees, service providers, and its agents against any and all legal liability or loss the City of Hollywood, Florida may incur due to the Contractor's failure to comply with such act.

*END OF SECTION*



City of Hollywood  
Public Utilities  
Vincent Morello, Director  
2600 Hollywood Boulevard, Hollywood, FL 33020

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## PROPOSAL DOCUMENT REPORT

IFB No. IFB-143-24-JJ

[Injection Well No 2 Repair](#)

RESPONSE DEADLINE: December 13, 2023 at 3:00 pm

Report Generated: Monday, February 12, 2024

## Florida Design Drilling LLC Proposal

### CONTACT INFORMATION

**Company:**

Florida Design Drilling LLC

**Email:**

jeff@fldrilling.com

**Contact:**

Jeffrey Holst

**Address:**

7733 Hooper Road  
West Palm Beach, FL 33411

**Phone:**

N/A

**Website:**

N/A

**Submission Date:**

Dec 13, 2023 12:57 PM

## ADDENDA CONFIRMATION

*No addenda issued*

## QUESTIONNAIRE

### 1. VENDOR REFERENCE FORM\*

Please download the below documents, complete, and upload.

- [Vendor Reference Form.pdf](#)

Form\_4\_-\_Vendor\_Reference\_Form\_FDD\_ASUs20231213.pdf

### 2. HOLD HARMLESS AND INDEMNITY CLAUSE\*

I, an authorized representative, the contractor, shall indemnify, defend and hold harmless the City of Hollywood, its elected and appointed officials, employees and agents for any and all suits, actions, legal or administrative proceedings, claims, damage, liabilities, interest, attorney's fees, costs of any kind whether arising prior to the start of activities or following the completion or acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act, error or omission, fault or negligence whether active or passive by the contractor, or anyone acting under its direction, control, or on its behalf in connection with or incident to its performance of the contract.

Confirmed

### 3. NON-COLLUSION STATEMENT\*

I, being first duly sworn, depose that:

- A. He/she is an authorized representative of the Company, the Proposer that has submitted the attached Proposal.
- B. He/she has been fully informed regarding the preparation and contents of the attached Proposal and of all pertinent circumstances regarding such Proposal;
- C. Such Proposal is genuine and is not a collusion or sham Proposal;

- D. Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contractor for which the attached Proposal has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices, profit or cost element of the Proposal price or the Proposal price of any other Proposer, or to secure an advantage against the City of Hollywood or any person interested in the proposed Contract; and
- E. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Confirmed

#### **4. CERTIFICATIONS REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS\***

The applicant certifies that it and its principals:

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, sentenced to a denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency;
- B. Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- D. Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.

Confirmed

**5. DRUG-FREE WORKPLACE PROGRAM\***

- A. IDENTICAL TIE PROPOSALS - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, 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 proposals will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:
1. 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.
  2. 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.
  3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
  4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will 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.
  5. 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.
  6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of these requirements.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Confirmed

## 6. SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY \*

Florida Statute 112.313 prohibits the solicitation or acceptance of Gifts. “No Public officer, employee of an agency, local government attorney, or candidate for nomination or election shall solicit or accept anything of value to the recipient, including a gift, loan, reward, promise of future employment, favor, or service, based upon any understanding that the vote, official action, or judgment of the public officer, employee, local government attorney, or candidate would be influenced thereby.” The term “public officer” includes “any person elected or appointed to hold office in any agency, including any person serving on an advisory body.”

The City of Hollywood/Hollywood CRA policy prohibits all public officers, elected or appointed, all employees, and their families from accepting any gifts of any value, either directly or indirectly, from any contractor, vendor, consultant, or business with whom the City/CRA does business.

The State of Florida definition of “gifts” includes the following:

- Real property or its use,
- Tangible or intangible personal property, or its use,
- A preferential rate or terms on a debt, loan, goods, or services,
- Forgiveness of indebtedness,
- Transportation, lodging, or parking,
- Food or beverage,
- Membership dues,
- Entrance fees, admission fees, or tickets to events, performances, or facilities,
- Plants, flowers or floral arrangements
- Services provided by persons pursuant to a professional license or certificate.
- Other personal services for which a fee is normally charged by the person providing the services.
- Any other similar service or thing having an attributable value not already provided for in this section.

Any contractor, vendor, consultant, or business found to have given a gift to a public officer or employee, or his/her family, will be subject to dismissal or revocation of contract.

As the person authorized to sign the statement, I certify that this firm will comply fully with this policy.

Confirmed

**7. Certificate of Insurance\***

See requirements in the [#SPECIAL TERM AND CONDITIONS](#) section.

COI\_City\_of\_Hollywood.pdf

**8. PROOF OF SUNBIZ REGISTRATION\***

Enter company FEIN to be verified in Sunbiz

20-2779560

[Click to Verify](#) *Value will be copied to clipboard*

**9. ACKNOWLEDGMENT AND SIGNATURE PAGE**

IF CORPORATION - DATE INCORPORATED/ORGANIZED:\*

2005

STATE INCORPORATED/ORGANIZED:\*

Florida

REMITTANCE ADDRESS\*

7733 Hooper Road, West Palm Beach, FL 33411

BIDDER/PROPOSER'S AUTHORIZED REPRESENTATIVE'S TYPED FULL NAME\*

Jeffrey Holst

IT IS HEREBY CERTIFIED AND AFFIRMED THAT THE BIDDER/PROPOSER CERTIFIES ACCEPTANCE OF THE TERMS, CONDITIONS, SPECIFICATIONS, ATTACHMENTS AND ANY ADDENDA. THE BIDDER/PROPOSER SHALL ACCEPT ANY AWARDS MADE AS A RESULT OF THIS SOLICITATION. BIDDER/PROPOSER FURTHER AGREES THAT PRICES QUOTED WILL REMAIN FIXED FOR THE PERIOD OF TIME STATED IN THE SOLICITATION.\*

Confirmed

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF BIDDER/PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE BID/PROPOSAL NON-RESPONSIVE. THE CITY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY BID/PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE BIDDER/PROPOSER TO THE TERMS OF ITS OFFER.\*

Confirmed

PROPOSAL FORM\*

Please download the below documents, complete, and upload.

- [Proposal Form.docx](#)

Proposal\_Form.pdf

#### **10. SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a) FLORIDA STATUTES ON PUBLIC ENTITY CRIMES**

THIS FORM STATEMENT IS SUBMITTED TO THE CITY OF HOLLYWOOD BY:\*

(Print individual's name and title) (Print name of entity submitting sworn statement)

Jeffrey Holst, Senior Vice President of Florida Design Drilling LLC

SWORN STATEMENT CONTINUATION:\*

Enter business address:

7733 Hooper Road, West Palm Beach, FL 33411

SWORN STATEMENT CONTINUATION:\*

Enter Federal Employer Identification Number (FEIN) is:

If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.

20-2779560

SWORN STATEMENT CONTINUATION:\*

I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in an federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

Confirmed

SWORN STATEMENT CONTINUATION:\*

I understand that “Affiliate,” as defined in paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime, or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another

person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

Confirmed

SWORN STATEMENT CONTINUATION:\*

I understand that "person," as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity.

The term "person" includes those officers, executives, partners, shareholders, employees, members, and agents who are active in management of an entity

Confirmed

SWORN STATEMENT CONTINUATION:\*

Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

Division of Administrative Hearings, determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (attach a copy of the Final Order).

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

SWORN STATEMENT CONFIRMATION\*

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

Confirmed

**PRICE TABLES**

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	Mobilization	1	LS	\$7,000.00	\$7,000.00
2	Repair of IW-2	1	LS	\$35,000.00	\$35,000.00
3	MIT and Brushing	1	LS	\$70,000.00	\$70,000.00
4	Additional Video Survey	1	Each	\$12,500.00	\$12,500.00
5	Wellhead Completion	1	LS	\$96,490.00	\$96,490.00
6	Replace Reclaimed Water Fire Hydrant	1	LS	\$20,000.00	\$20,000.00
7	Allowance for Undefined Conditions (Please Insert \$50,000.00)	1	LS	\$50,000.00	\$50,000.00

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
8	Consideration for Indemnification (Please Insert \$10.00)	1	LS	\$10.00	\$10.00
9	Demobilization	1	LS	\$4,000.00	\$4,000.00
<b>TOTAL</b>					<b>\$295,000.00</b>

# FORM 4

## VENDOR REFERENCE FORM

City of Hollywood Solicitation #: IFB-143-23-JJ  
 Reference for: Florida Design Drilling LLC

Organization/Firm Name providing reference: ASRus, LLC  
 Organization/Firm Contact Name: Pete Larkin Title: Vice President  
 Email: PLarkin@ASRus.net Phone: (813) 382-8516  
 Name of Referenced Project: TEC Big Bend Power Station DIWs Contract No: 20-00180  
 Date Services were provided: 10/26/2020 - 8/24/2023 Project Amount: \$13,223,373  
 Referenced Vendor's role in Project:  Prime Vendor  Subcontractor/ Subconsultant  
 Would you use the Vendor again?  Yes  No. Please specify in additional comments

Description of services provided by Vendor (provide additional sheet if necessary):  
Construction and testing of two Class I injection wells.

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
<b>Vendor's Quality of Service</b>				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Vendor's Organization:</b>				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Staff turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Timeliness/Cost Control of:</b>				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Comments (provide additional sheet if necessary):  
Florida Design Drilling is well managed, professional, and knowledgeable in all aspects of UIC drilling and testing.

****THIS SECTION FOR CITY USE ONLY****						
Verified via:	Email:	<input type="checkbox"/>	Verbal:	<input type="checkbox"/>	Mail:	<input type="checkbox"/>
Verified by:	Name:				Title:	
	Department:				Date:	



# Additional Insured – Automatic – Owners, Lessees Or Contractors



Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO 3759709-05	01/01/2023	01/01/2024		57072000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named Insured:

Address (including ZIP Code):

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

A. Section II – Who Is An Insured is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations or "your work" as included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, the insurance afforded to such additional insured:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

- a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

- C. The following is added to Paragraph 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section IV – Commercial General Liability Conditions:

The additional insured must see to it that:

1. We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
2. We receive written notice of a claim or "suit" as soon as practicable; and
3. A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

- D. For the purposes of the coverage provided by this endorsement:

1. The following is added to the Other Insurance Condition of Section IV – Commercial General Liability Conditions:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

- a. The additional insured is a Named Insured under such other insurance; and
- b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph 4.b. of the Other Insurance Condition of Section IV – Commercial General Liability Conditions:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

- E. This endorsement does not apply to an additional insured which has been added to this policy by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

- F. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section III – Limits Of Insurance:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Paragraph A. of this endorsement; or
  2. Available under the applicable Limits of Insurance shown in the Declarations,
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.



# Additional Insured – Automatic – Owners, Lessees Or Contractors

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

Policy No. GLO 3759709-05

Effective Date: 01/01/2023

This endorsement modifies insurance provided under the:

## **Commercial General Liability Coverage Part**

**A. Section II – Who Is An Insured** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured under a written contract or written agreement executed by you, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" and subject to the following:

1. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

- a. The Insurance Services Office (ISO) ISO CG 20 10 (10/01 edition); or
- b. The ISO CG 20 37 (10/01 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" arises out of:

- (1) Your ongoing operations, with respect to Paragraph 1.a. above; or
- (2) "Your work", with respect to Paragraph 1.b. above,  
which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph 1., insurance afforded to such additional insured:

- (a) Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and
- (b) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

2. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

- a. The Insurance Services Office (ISO) ISO CG 20 10 (07/04 edition); or
- b. The ISO CG 20 37 (07/04 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part, by:

- (1) Your acts or omissions; or
- (2) The acts or omissions of those acting on your behalf,

in the performance of:

- (a)** Your ongoing operations, with respect to Paragraph **2.a.** above; or
- (b)** "Your work" and included in the "products-completed operations hazard", with respect to Paragraph **2.b.** above,

which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **2.**, insurance afforded to such additional insured:

- (i)** Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and
  - (ii)** Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.
- 3.** If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

- a.** Under the ISO CG 20 10 (04/13 edition, any subsequent edition or if no edition date is specified); or
- b.** With respect to ongoing operations (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part by:

- (1)** Your acts or omissions; or
- (2)** The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations, which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **3.**, insurance afforded to such additional insured:

- (a)** Only applies to the extent permitted by law;
  - (b)** Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured; and
  - (c)** Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement.
- 4.** If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

- a.** Under the ISO CG 20 37 (04/13 edition, any subsequent edition or if no edition date is specified); or
- b.** With respect to the "products-completed operations hazard" (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury" or "property damage" is caused, in whole or in part by "your work" and included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **4.**, insurance afforded to such additional insured:

- (1)** Only applies to the extent permitted by law;
- (2)** Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured;
- (3)** Only applies if the "bodily injury" or "property damage" occurs during the policy period and subsequent to your execution of the written contract or written agreement; and
- (4)** Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

- B.** Solely with respect to the insurance afforded to any additional insured referenced in Section **A.** of this endorsement, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

1. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

- C.** Solely with respect to the coverage provided by this endorsement, the following is added to Paragraph **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit** of Section **IV – Commercial General Liability Conditions**:

The additional insured must see to it that:

- (1) We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
- (2) We receive written notice of a claim or "suit" as soon as practicable; and
- (3) A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

- D.** Solely with respect to the coverage provided by this endorsement:

1. The following is added to the **Other Insurance** Condition of Section **IV – Commercial General Liability Conditions**:

**Primary and Noncontributory insurance**

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

- a. The additional insured is a Named Insured under such other insurance; and
- b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph **4.b.** of the **Other Insurance** Condition under Section **IV – Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

- E.** This endorsement does not apply to an additional insured which has been added to this Coverage Part by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

- F.** Solely with respect to the insurance afforded to an additional insured under Paragraph **A.3.** or Paragraph **A.4.** of this endorsement, the following is added to Section **III – Limits Of Insurance**:

**Additional Insured – Automatic – Owners, Lessees Or Contractors Limit**

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Section **A.** of this endorsement; or
2. Available under the applicable Limits of Insurance shown in the Declarations,  
whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms, conditions, provisions and exclusions of this policy remain the same.

# Blanket Notification to Others of Cancellation or Non-Renewal



Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO 3759709-05	01/01/2023	01/01/2024		57072000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

- A. If we cancel or non-renew this Coverage Part by written notice to the first Named Insured, we will mail or deliver notification that such Coverage Part has been cancelled or non-renewed to each person or organization shown in a list provided to us by the first Named Insured if you are required by written contact or written agreement to provide such notification. However, such notification will not be mailed or delivered if a conditional notice of renewal has been sent to the first Named Insured. Such list:
  - 1. Must be provided to us prior to cancellation or non-renewal;
  - 2. Must contain the names and addresses of only the persons or organizations requiring notification that such Coverage Part has been cancelled or non-renewed; and
  - 3. Must be in an electronic format that is acceptable to us.
- B. Our notification as described in Paragraph A. of this endorsement will be based on the most recent list in our records as of the date the notice of cancellation or non-renewal is mailed or delivered to the first Named Insured. We will mail or deliver such notification to each person or organization shown in the list:
  - 1. Within seven days of the effective date of the notice of cancellation, if we cancel for non-payment of premium; or
  - 2. At least 30 days prior to the effective date of:
    - a. Cancellation, if cancelled for any reason other than nonpayment of premium; or
    - b. Non-renewal, but not including conditional notice of renewal.
- C. Our mailing or delivery of notification described in Paragraphs A. and B. of this endorsement is intended as a courtesy only. Our failure to provide such mailing or delivery will not:
  - 1. Extend the Coverage Part cancellation or non-renewal date;
  - 2. Negate the cancellation or non-renewal; or
  - 3. Provide any additional insurance that would not have been provided in the absence of this endorsement.
- D. We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the list provided to us as described in Paragraphs A. and B. of this endorsement.

All other terms and conditions of this policy remain unchanged.

# Waiver Of Subrogation (Blanket) Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l Prem.	Return Prem.
GLO 3759709-05	01/01/2023	01/01/2024		57072000	\$ INCL	\$

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the Transfer Of Rights Of Recovery Against Others To Us Condition:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### **SCHEDULE**

**Designated Construction Project(s):**

A GENERAL AGGREGATE LIMIT APPLIES TO EACH CONSTRUCTION PROJECT WHERE THE NAMED INSURED IS PERFORMING OPERATIONS, HOWEVER, A GENERAL AGGREGATE LIMIT DOES NOT APPLY TO ANY CONSTRUCTION PROJECT WHERE THE NAMED INSURED IS PERFORMING OPERATIONS THAT ARE INSURED UNDER A WRAP UP OR ANY OTHER CONSOLIDATED OR SIMILAR INSURANCE PROGRAM.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage **A**, and for all medical expenses caused by accidents under Section I – Coverage **C**, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
  - 1.** A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  - 2.** The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage **A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage **C** regardless of the number of:
    - a.** Insureds;
    - b.** Claims made or "suits" brought; or
    - c.** Persons or organizations making claims or bringing "suits".
- 3.** Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
- 4.** The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage **A**, and for all medical expenses caused by accidents under Section I – Coverage **C**, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D.** If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E.** The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

# Blanket Notification to Others of Cancellation or Non-Renewal



Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP 3759710-05	01/01/2023	01/01/2024		57072000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial Automobile Coverage Part

- A. If we cancel or non-renew this Coverage Part by written notice to the first Named Insured, we will mail or deliver notification that such Coverage Part has been cancelled or non-renewed to each person or organization shown in a list provided to us by the first Named Insured if you are required by written contact or written agreement to provide such notification. However, such notification will not be mailed or delivered if a conditional notice of renewal has been sent to the first Named Insured. Such list:
  - 1. Must be provided to us prior to cancellation or non-renewal;
  - 2. Must contain the names and addresses of only the persons or organizations requiring notification that such Coverage Part has been cancelled or non-renewed; and
  - 3. Must be in an electronic format that is acceptable to us.
- B. Our notification as described in Paragraph A. of this endorsement will be based on the most recent list in our records as of the date the notice of cancellation or non-renewal is mailed or delivered to the first Named Insured. We will mail or deliver such notification to each person or organization shown in the list:
  - 1. Within seven days of the effective date of the notice of cancellation, if we cancel for non-payment of premium; or
  - 2. At least 30 days prior to the effective date of:
    - a. Cancellation, if cancelled for any reason other than nonpayment of premium; or
    - b. Non-renewal, but not including conditional notice of renewal.
- C. Our mailing or delivery of notification described in Paragraphs A. and B. of this endorsement is intended as a courtesy only. Our failure to provide such mailing or delivery will not:
  - 1. Extend the Coverage Part cancellation or non-renewal date;
  - 2. Negate the cancellation or non-renewal; or
  - 3. Provide any additional insurance that would not have been provided in the absence of this endorsement.
- D. We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the list provided to us as described in Paragraphs A. and B. of this endorsement.

All other terms and conditions of this policy remain unchanged.



# Coverage Extension Endorsement – Florida

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Policy No. BAP 3759710-05

Effective Date: 01/01/2023

This endorsement modifies insurance provided under the:

Business Auto Coverage Form  
Motor Carrier Coverage Form

## A. Amended Who Is An Insured

1. The following is added to the Who Is An Insured Provision in Section II – Covered Autos Liability Coverage:

The following are also "insureds":

- a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.
- b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.
- c. Anyone else who furnishes an "auto" referenced in Paragraphs A.1.a. and A.1.b. in this endorsement.
- d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the Other Insurance Condition in the Business Auto Coverage Form and the Other Insurance – Primary and Excess Insurance Provisions Condition in the Motor Carrier Coverage Form:

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

## B. Amendment – Supplementary Payments

Paragraphs a.(2) and a.(4) of the Coverage Extensions Provision in Section II – Covered Autos Liability Coverage are replaced by the following:

- (2) Up to \$5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.
- (4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to \$500 a day because of time off from work.

## C. Fellow Employee Coverage

The Fellow Employee Exclusion contained in Section II – Covered Autos Liability Coverage does not apply.

D. Driver Safety Program Liability and Physical Damage Coverage

1. The following is added to the Racing Exclusion in Section II – Covered Autos Liability Coverage:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

2. The following is added to Paragraph 2. in B. Exclusions of Section III – Physical Damage Coverage of the Business Auto Coverage Form and Paragraph 2.b. in B. Exclusions of Section IV – Physical Damage Coverage of the Motor Carrier Coverage Form:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

E. Lease or Loan Gap Coverage

The following is added to the Coverage Provision of the Physical Damage Coverage Section:

Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

- a. Any amount paid under the Physical Damage Coverage Section of the Coverage Form; and
- b. Any:
  - (1) Overdue lease or loan payments at the time of the "loss";
  - (2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;
  - (3) Security deposits not returned by the lessor;
  - (4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and
  - (5) Carry-over balances from previous leases or loans.

F. Towing and Labor

Paragraph A.2. of the Physical Damage Coverage Section is replaced by the following:

We will pay up to \$75 for towing and labor costs incurred each time a covered "auto" that is a "private passenger type", light truck or medium truck is disabled. However, the labor must be performed at the place of disablement.

As used in this provision, "private passenger type" means a private passenger or station wagon type "auto" and includes an "auto" of the pickup or van type if not used for business purposes.

G. Extended Glass Coverage

The following is added to Paragraph A.3.a. of the Physical Damage Coverage Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

H. Hired Auto Physical Damage – Increased Loss of Use Expenses

The Coverage Extension for Loss Of Use Expenses in the Physical Damage Coverage Section is replaced by the following:

Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

- (1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

- (2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or
  - (3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".
- However, the most we will pay for any expenses for loss of use is \$100 per day, to a maximum of \$3000.

I. Personal Effects Coverage

The following is added to the Coverage Provision of the Physical Damage Coverage Section:

Personal Effects Coverage

- a. We will pay up to \$750 for "loss" to personal effects which are:
  - (1) Personal property owned by an "insured"; and
  - (2) In or on a covered "auto".
- b. Subject to Paragraph a. above, the amount to be paid for "loss" to personal effects will be based on the lesser of:
  - (1) The reasonable cost to replace; or
  - (2) The actual cash value.
- c. The coverage provided in Paragraphs a. and b. above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:
  - (1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.
  - (2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.
  - (3) Paintings, statuary and other works of art.
  - (4) Contraband or property in the course of illegal transportation or trade.
  - (5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

J. Tapes, Records and Discs Coverage

- 1. The Exclusion in Paragraph B.4.a. of Section III – Physical Damage Coverage in the Business Auto Coverage Form and the Exclusion in Paragraph B.2.c. of Section IV – Physical Damage Coverage in the Motor Carrier Coverage Form does not apply.
- 2. The following is added to Paragraph 1.a. Comprehensive Coverage under the Coverage Provision of the Physical Damage Coverage Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

- (a) Are the property of an "insured"; and
- (b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is \$500. The Physical Damage Coverage Deductible Provision does not apply to such "loss".

K. Airbag Coverage

The Exclusion in Paragraph B.3.a. of Section III – Physical Damage Coverage in the Business Auto Coverage Form and the Exclusion in Paragraph B.4.a. of Section IV – Physical Damage Coverage in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

L. Two or More Deductibles

The following is added to the Deductible Provision of the Physical Damage Coverage Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or
2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

M. Temporary Substitute Autos – Physical Damage

1. The following is added to Section I – Covered Autos:

Temporary Substitute Autos – Physical Damage

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

1. Breakdown;
  2. Repair;
  3. Servicing;
  4. "Loss"; or
  5. Destruction.
2. The following is added to the Paragraph A. Coverage Provision of the Physical Damage Coverage Section:

Temporary Substitute Autos – Physical Damage

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

N. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph a. of the Duties In The Event Of Accident, Claim, Suit Or Loss Condition is replaced by the following:

- a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

- (1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";
- (2) The "insured's" name and address; and
- (3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

O. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the Transfer Of Rights Of Recovery Against Others To Us Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

P. Employee Hired Autos – Physical Damage

Paragraph b. of the Other Insurance Condition in the Business Auto Coverage Form and Paragraph f. of the Other Insurance – Primary and Excess Insurance Provisions Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

- (1) Any covered "auto" you lease, hire, rent or borrow; and
- (2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

Q. Unintentional Failure to Disclose Hazards

The following is added to the Concealment, Misrepresentation Or Fraud Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

- (1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or
- (2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

R. Hired Auto – World Wide Coverage

Paragraph 7.b.(5) of the Policy Period, Coverage Territory Condition is replaced by the following:

- (5) Anywhere else in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

S. Bodily Injury Redefined

The definition of "bodily injury" in the Definitions Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

T. Expected Or Intended Injury

The Expected Or Intended Injury Exclusion in Paragraph B. Exclusions under Section II – Covered Auto Liability Coverage is replaced by the following:

Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

U. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph A.4.a. of Section III – Physical Damage Coverage is replaced by the following:

4. Coverage Extensions

a. Transportation Expenses

We will pay up to \$50 per day to a maximum of \$1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

V. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph A. Coverage of the Physical Damage Coverage Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of \$2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

W. Return of Stolen Automobile

The following is added to the Coverage Extension Provision of the Physical Damage Coverage Section:

If a covered "auto" is stolen and recovered, we will pay the cost of transport to return the "auto" to you. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

FLORIDA NOTIFICATION TO OTHERS OF CANCELLATION OR NONRENEWAL ENDORSEMENT

This endorsement is used to add the following to Part Six of the policy.

PART SIX - CONDITIONS

F. Notification to Others of Cancellation

1. If you or we cancel or non-renew this policy by written notice to you for any reason other than nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation or non-renewal to the name and address corresponding to each person or organization shown in the Schedule below. Notification to such person or organization will be provided at least 10 days prior to the effective date of the cancellation or non-renewal, as advised in our notice to you, or the longer number of days notice if indicated in the Schedule below.
2. If you or we cancel this policy by written notice to you for nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation to the name and address corresponding to each person or organization shown in the Schedule below at least 10 days prior to the effective date of such cancellation.
3. If notice as described in Paragraphs 1. or 2. of this endorsement is mailed, proof of mailing will be sufficient proof of such notice.

SCHEDULE	
Name and Address of Other Person(s) / Organization(s):	Number of Days Notice:
WHERE REQUIRED BY WRITTEN CONTRACT	30

All other terms and conditions of this policy remain unchanged.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

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This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated. (The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective ! " ! " # \$ Policy No. % & \$ ' ( ) ' \* " ( Endorsement No.
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Countersigned By Donnie Lambert, III

## PROPOSAL

TO THE MAYOR AND COMMISSIONERS  
CITY OF HOLLYWOOD, FLORIDA

SUBMITTED December 13<sup>th</sup>, 2023

Dear Mayor and Commissioners:

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

The BIDDER further declares that he has examined the site of the Work and informed himself fully in regard to all conditions pertaining to the place where the Work is to be done; that he has examined the Drawings and Specifications for the Work and contractual documents relative thereto, including the Notice to Bidders, Instructions to Bidders, Proposal Bid Form, Form of Bid Bond, Form of Contract and Form of Performance Bond, General, Supplementary and Technical Specifications, Addenda, Drawings, and Local Preference Program, Exhibit A, and has read all of the Provisions furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.

The undersigned BIDDER has not divulged to, discussed or compared his bid with other bidders and has not colluded with any other BIDDER of parties to this bid whatever.

If this Proposal is accepted, the undersigned BIDDER proposes and agrees to enter into and execute the Contract with the City of Hollywood, Florida, in the form of Contract specified; of which this Proposal, Instructions to Bidders, General Specifications, Supplementary Conditions and Drawings shall be made a part for the performance of Work described therein; to furnish the necessary bond equal to one hundred (100) percent of the total Contract base bid, the said bond being in the form of a Cash Bond or Surety Bond prepared on the applicable approved bond form furnished by the CITY; to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation, supervision, labor and all means necessary to construct and complete the work specified in the Proposal and Contract and called for in the Drawings and in the manner specified; to commence Work on the effective date established in the "Notice to Proceed" from the ENGINEER; and to substantially complete all Contract Work within 150 days with final completion within 180 days, and stated in the "Notice to Proceed" or pay liquidated damages for each calendar day in excess thereof, or such actual and consequential damages as may result therefrom, and to abide by the Local Preference Ordinance, Exhibit A.

The BIDDER acknowledges receipt of the any and all addenda.

And the undersigned agrees that in case of failure on his part to execute the said Contract and the Bond within ten (10) days after being presented with the prescribed Contract forms, the check or Bid Bond accompanying his bid, and the money payable thereon, shall be paid into the funds of the City of Hollywood, Florida, otherwise, the check or Bid Bond accompanying this Proposal shall be returned to the undersigned.

Attached hereto is a certified check on the

\_\_\_\_\_ Bank of \_\_\_\_\_

or approved Bid Bond for the sum of

5% of the bid amount Dollars (5%) according to the conditions under the Instructions to Bidders and provisions therein.

NOTE: If a Bidder is a corporation, the legal name of the corporation shall be set forth below, together with signature(s) of the officer or officers authorized to sign Contracts on behalf of the corporation and corporate seal; if Bidder is a partnership, the true name of the firm shall be set forth below with the signature(s) of the partner or partners authorized to sign Contracts in behalf of the partnership; and if the Bidder is an individual, his signature shall be placed below; if a partnership, the names of the general partners.

WHEN THE BIDDER IS AN INDIVIDUAL:

\_\_\_\_\_  
(Signature of Individual)

\_\_\_\_\_  
(Printed Name of Individual)

\_\_\_\_\_  
(Address)

\*\*\*\*\*

WHEN THE BIDDER IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A TRADE NAME:

\_\_\_\_\_  
(Name of Firm)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Signature of Individual) (SEAL)

\*\*\*\*\*

WHEN THE BIDDER IS A PARTNERSHIP:

\_\_\_\_\_  
(Name of Firm) A Partnership

\_\_\_\_\_  
(Address)

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

Name and Address of all Partners:

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

\*\*\*\*\*

WHEN THE BIDDER IS A JOINT VENTURE:

\_\_\_\_\_  
(Correct Name of Corporation)

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

\_\_\_\_\_  
(Official Title)

As Joint Venture  
(Corporate Seal)

Organized under the laws of the State of \_\_\_\_\_, and authorized by the law to make this bid and perform all Work and furnish materials and equipment required under the Contract Documents.

\*\*\*\*\*

WHEN THE BIDDER IS A CORPORATION:

Florida Design Drilling LLC  
(Correct Name of Corporation)

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

Jeffrey Holst, Senior Vice President  
(Official Title)

7733 Hooper Road  
West Palm Beach, FL 33411  
(Address of Corporation)



Organized under the laws of the State of Florida, and authorized by the law to make this bid and perform all Work and furnish materials and equipment required under the Contract Documents.

CERTIFIED COPY OF RESOLUTION OF  
BOARD OF DIRECTORS

Florida Design Drilling LLC  
(Name of Corporation)

RESOLVED that Jeffrey Holst  
(Person Authorized to Sign)

Senior Vice President of Florida Design Drilling LLC  
(Title) (Name of Corporation)

be authorized to sign and submit the Bid or Proposal of this corporation for the following project:

**[Injection Well No. 2 Repair]**  
**[23-9737]**  
**Bid No. IFB-143-23-JJ**

The foregoing is a true and correct copy of the Resolution adopted by

Florida Design Drilling LLC at a meeting of its Board of  
(Name of Corporation)

Directors held on the 8<sup>th</sup> day of December, 2023.

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

Title: Jeanine Alfieri, Secretary

(SEAL)



The above Resolution MUST BE COMPLETED if the Bidder is a Corporation.

- END OF SECTION -

**BID TABULATION**  
**CITY OF HOLLYWOOD SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT**  
**IW-2 REPAIR**  
**BID OPENING DATE: December 13, 2023**  
**CITY PROJECT 23-9727**

Item No.	Description	Quantity		Bid Amount		Bid Amount	
				Florida Design Drilling, LLC		Southeast Drilling Services	
				Unit Price	Total Price	Unit Price	Total Price
<b>BASE BID</b>							
1	Mobilization	1	LS	\$7,000	\$7,000	\$135,000	\$135,000
2	Repair of IW-2	1	LS	\$35,000	\$35,000	\$200,000	\$200,000
3	MIT and Brushing	1	LS	\$70,000	\$70,000	\$85,000	\$85,000
4	Additional Video Survey	1	Each	\$12,500	\$12,500	\$6,000	\$6,000
5	Wellhead Completion	1	LS	\$96,490	\$96,490	\$20,000	\$20,000
6	Replace Reclaimed Water Fire Hydrant	1	LS	\$20,000	\$20,000	\$15,000	\$15,000
7	Allowance for Undefined Conditions	1	LS	\$50,000	\$50,000	\$50,000	\$50,000
8	Consideration for Indemnification	1	LS	\$10	\$10	\$10	\$10
9	Demobilization	1	LS	\$4,000	\$4,000	\$25,000	\$25,000
<b>TOTAL BASE BID FOR ITEMS 1 THROUGH 9</b>					<b>\$295,000</b>		<b>\$536,010</b>

**PROPOSAL CHECKLIST (YES OR NO?)**

Submittal Checklist Form	No	Yes
Acknowledgement and Signature Page	No	Yes
Bid Form	Yes	Yes
Vendor Reference Form	Yes	Yes
Hold Harmless and Indemnity Clause	No	Yes
Non-Collusion Affidavit	No	Yes
Sworn Statement	No	Yes
Drug-Free Workplace Program	No	Yes
Solicitation, Giving and Acceptance of Gifts Policy	No	Yes
W-9	No	Yes
Trench Safety Form	No	Yes
Bid Guaranty Form	No	Yes
List of Subcontractors	No	Yes
Certificate of Insurance	Yes	Yes
Florida Sunbiz Registration	Yes	Yes
General Information Form 15	No	Yes
Proposal Form 16 (1)	Yes	Yes
Bid Bond	Yes	Yes

Notes:  
1 FDD Proposal form includes 150 days to SC and 180 to FC. SED form includes 180 days to SC and 45 days to FC

J. Philip Cooke, P.E.  
No. 47137



ATTACHMENT A  
CONTRACT

THIS AGREEMENT, made and entered into, this \_\_\_\_ day of \_\_\_\_\_, A.D., \_\_\_\_\_, by and between the CITY OF HOLLYWOOD, Florida, a municipal corporation of the State of Florida, part of the first part, (hereinafter sometimes called the "CITY"), and

**FLORIDA DESIGN DRILLING LLC**

party of the second part (hereinafter sometimes called the "CONTRACTOR").

WITNESSETH: The parties hereto, for the considerations herein-after set forth, mutually agree as follows:

Article 1. Scope of Work: The CONTRACTOR shall furnish all labor, materials, and equipment and perform all work in the manner and form provided by the Contract Documents, for:

**Injection Well No. 2 Repair  
Project No. 23-9737  
Bid No. IFB-143-23-JJ**

Article 2. The Contract Sum: The CITY shall pay to the CONTRACTOR, for the faithful performance of the Contract, in lawful money of the United States of America, and subject to additions and deductions as provided in the Contract Documents, as follows:

Based upon the prices shown in the Proposal heretofore submitted to the CITY by the CONTRACTOR, a copy of said Proposal being a part of these Contract Documents, the aggregate amount of this Contract being the sum of **Two Hundred and Ninety-Five Thousand Dollars and Zero Cents (\$295,000.00)**.

Article 3. Partial and Final Payments: In accordance with the provisions fully set forth in the "General Conditions" of the "Specifications", and subject to additions and deductions as provided, the CITY shall pay the CONTRACTOR as follows:

- (a) On the 15th day, or the first business day thereafter, of each calendar month, the CITY shall make partial payments to the CONTRACTOR on the basis of a duly certified and approved estimate of work performed during the preceding calendar month by the CONTRACTOR, less five percent (5%) of the amount of such estimate which is to be retained by the CITY until all work has been performed strictly in accordance with this Agreement and until such work has been accepted by the CITY. The parties' rights and obligations regarding retainage are further specified in Florida Statute Section 218.735.
- (b) Upon submission by the CONTRACTOR of evidence satisfactory to the CITY that all payrolls, material bills and other costs incurred by the CONTRACTOR in connection with the construction of the WORK have been paid in full, and also, after all guarantees that may be required in the Specifications have been furnished and are found acceptable by the CITY, final payment on

account of this Agreement shall be made within sixty (60) days after completion by the CONTRACTOR of all work covered by this Agreement and acceptance of such work by the ENGINEER and approved by the CITY.

Article 4. Time of Completion: The CONTRACTOR shall commence work to be performed under this Contract within ten (10) consecutive calendar days after date of written Notice To Proceed and shall fully complete the Contract in accordance within the Contract Documents and meet all intermediate milestone completion dates required after said date of written notice as set forth in the Proposal, as may be modified by Instructions to Bidders, and stated in the Notice to Proceed.

It is mutually agreed between the parties hereto, that time is the essence, and in the event that construction of the WORK is not completed within the Contract Time and per intermediate dates, as may have been modified solely in accordance with the General Conditions of this Contract, that from the compensation otherwise to be paid to the CONTRACTOR, the CITY is authorized and shall retain, for each day thereafter, Sundays and holidays included, the sum set forth in the Supplementary General Conditions of this Contract as liquidated damages sustained by the CITY in the event of such default by the CONTRACTOR, or shall withhold such compensation for actual and consequential damages as may be stated therein or contemplated therefrom.

Article 5. Additional Bond: It is further mutually agreed between the parties hereto, that if, at any time after the execution of this Agreement and the Payment and Performance Bonds required herein for the express purpose of assuring the faithful performance of the Contractor's work hereto attached, the CITY shall deem the surety or sureties' to be unsatisfactory, or, if for any reason, said bonds cease to be adequate to cover the performance of the work, the CONTRACTOR shall, at his expense, within five (5) days after receipt of notice from the CITY furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the CITY. In such event, no further payment to the CONTRACTOR shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the CITY.

Article 6. Contract Documents: All of the documents hereinafter listed form the Contract and they are as fully a part of the Contract as if hereto attached, or repeated in this Agreement:

1.	Introduction	15.	General Terms and Conditions
2.	Special Terms and Conditions	16.	Scope of Services
3.	Submittal Checklist Form	17.	Contract
4.	Acknowledgement and Signature Page	18.	Drug-Free Workplace Program
5.	Bid Form	19.	Solicitation, Giving, and Acceptance...
6.	Vendor Reference Form	20.	W-9 (Request for Taxpayer Identification)
7.	Hold Harmless and Indemnity Clause	21.	Performance Bond
8.	Proposal	22.	Payment Bond
9.	Non-Collusion Affidavit	23.	General Conditions, Public Utilities
10.	Sworn Statement...Public Entity Crimes	24.	Supplementary General Conditions
11.	Information Required from Bidders	25.	Addenda

12.	Certifications Regarding Debarment...	26.	Specifications
13.	Trench Safety Form	27.	Drawings
14.	Bid Guaranty Form	28.	List of Subcontractors

Article 7. The rate of wages and fringe benefits, or cash equivalent, for all laborers, mechanics and apprentices employed by any contractor or subcontractor on the work covered by the contract shall be not less than the prevailing rate of wages and fringe benefit payments or cash equivalent for similar skills or classifications of work as established by the General Wage Decision by the United States Department of Labor for Broward County, Florida that is in effect prior to the date the city issues its invitation for bids. If the General Wage Decision fails to provide for a fringe benefit rate for any worker classification, then the fringe benefit rate applicable to the worker classification shall be the fringe benefit rate applicable to the worker classification with a fringe benefit rate that has a basic hourly wage closest in dollar amount to the worker classification for which no fringe benefit rate has been provided.

Article 8. No additional work or extras shall be performed unless the same be duly authorized by appropriate action of the City.

Article 9. That in the event either party brings suit for enforcement of disagreement, the prevailing party shall be entitled to attorney's fees and court costs in addition to any other remedy afforded by law.

Article 10. The Contractor shall guarantee the complete project against poor workmanship and faulty materials for a period of twelve (12) months after final payment and shall immediately correct any defects which may appear during this period upon notification by the City or the Engineer.

Article 11. The making and acceptance of the final payment shall constitute a waiver of all claims by the Contractor, except those previously made and still unsettled.

\*\*\*\*\*

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and date first above written in three (3) counterparts, each of which shall, without proof or accounting for the other counterparts, be deemed an original contract:

THE CITY OF HOLLYWOOD, FLORIDA  
Party of the First Part

By: \_\_\_\_\_ (SEAL)  
JOSH LEVY, MAYOR

ATTEST:

\_\_\_\_\_  
PATRICIA A. CERNY, MMC  
City Clerk



WHEN THE CONTRACTOR IS A CORPORATION:

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
(Correct Name of Corporation)

BY: \_\_\_\_\_ (SEAL)  
President

\*\*\*\*\*

APPROVED AS TO FORM:

APPROVED AS TO FINANCE:

By \_\_\_\_\_  
DOUGLAS R. GONZALES  
City Attorney

By \_\_\_\_\_  
STEPHANIE TINSLEY  
Financial Services Director

CERTIFICATE

**STATE OF FLORIDA)  
COUNTY OF BROWARD)**

***I HEREBY CERTIFY*** that a meeting of the Board of Directors of \_\_\_\_\_,  
a corporation under the laws of the State of \_\_\_\_\_, was held on \_\_\_\_\_,  
20\_\_, and the following resolution was duly passed and adopted:

"RESOLVED, that \_\_\_\_\_ as \_\_\_\_\_ President of the corporation,  
be and he is hereby authorized to execute the contracts on behalf of this  
corporation, and that his execution thereof, attested by the Secretary of  
the corporation and with corporate seal affixed, shall be the official act and  
deed of this corporation."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of  
the corporation, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary

- END OF SECTION -

ATTACHMENT A  
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we \_\_\_\_\_,  
Name Address Tel. No.

as Principal, and \_\_\_\_\_,  
Name Address Tel. No.

as Surety, are held and firmly bound unto the City of Hollywood in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment of said sum we bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, for the faithful performance of a certain written contract, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ entered into between the Principal and the City of Hollywood, Florida, for the installation of **Injection Well No. 2 Repair, (Bid No. IFB-143-24-JJ)**.

A copy of said Contract, **Project No. 23-9737**, is incorporated herein by reference and is made a part hereof as if fully copied herein.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that if the Principal shall in all respects comply with the terms and conditions of said Contract and his obligations thereunder, including all of the Contract Documents (that include the Introduction, Special Terms and Conditions, Scope of Services, General Terms & Conditions, Submittal Checklist Form, Instructions to Bidders, Proposal, Proposal Bid Form, Basis of Payment, Bid Guaranty Form , Trench Safety Form, Information Required from Bidders, Vendor Reference Forms, Hold Harmless and Indemnity Clause, Non-Collusion Affidavit, Sworn Statement...Public Entity Crimes, Certifications Regarding Debarment... , Drug-Free Workplace Program, Solicitation, Giving, and Acceptance..., Contract, Performance Bond, Payment Bond, General and Supplementary General Conditions, Technical Specifications, Addenda and Drawings), therein referred to and made a part thereof, and such alterations as may be made in said Drawings and Specifications as therein provided for, and shall indemnify and save harmless the City of Hollywood against and from all expenses, damages, injury or conduct, want of care of skill, negligence or default, including patent infringement on the part of said Principal, his agents or employees, in the execution or performance of said Contract, including errors in the Drawings furnished by said Principal, and further, if the Principal shall promptly make payments to all who supply him, with labor and/or materials, used directly or indirectly by the Principal in the prosecution of the work provided for in said Contract, then this obligation shall be null and void; otherwise, the Principal and Surety, jointly and severally, agree to pay the City of Hollywood any difference between the sum that the City of Hollywood may be obliged to pay for the completion of said work, by Contract or otherwise, and the sum that the City of Hollywood would have been obliged to pay for the completion said work had the Principal properly executed all of the provisions of said Contract, and any damages, whether direct, indirect, or consequential, which the City of Hollywood may incur as a result of the failure of the said Principal to properly execute all of the provisions of said Contract.

AND, the said Principal and Surety hereby further bind themselves, their successors, executors, administrators and assigns, jointly and severally, that they will amply and fully protect the City of Hollywood against, and will pay any and all amounts, damages, costs and judgments which may be recovered against or which the Owner may be called upon to pay to any person or corporation by reason of any damage arising from the performance of the said work, repair or maintenance thereof, or the manner of doing the same, or his agents or his servants, or the infringements of any patent rights by reason of the use of any material furnished or work done, as aforesaid or otherwise.

AND, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications and Drawings accompanying the same, shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications and Drawings.

WHEN THE PRINCIPAL IS AN INDIVIDUAL:

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Signature of Individual)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Printed Name of Individual)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Address)

WHEN THE PRINCIPAL IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A TRADE NAME:

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Name of Firm)

\_\_\_\_\_  
(Address)

By: \_\_\_\_\_ (Seal)  
(Signature of Individual)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Address)

\*\*\*\*\*

WHEN THE PRINCIPAL IS A PARTNERSHIP:

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Name of Partnership)

\_\_\_\_\_  
(Address)

By: \_\_\_\_\_(Seal)  
(Partner)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Printed Name of Partner)

\_\_\_\_\_  
(Address)

\*\*\*\*\*

WHEN THE PRINCIPAL IS A CORPORATION:

Attest:

\_\_\_\_\_  
(Secretary)

\_\_\_\_\_  
(Name of Corporation)

By: \_\_\_\_\_(Seal)  
(Affix Corporate Seal)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Official Title)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, \_\_\_\_\_, certify that I am the Secretary of the corporation named as Principal in the within bond; that \_\_\_\_\_, who signed the said bond on behalf of the Principal was then \_\_\_\_\_ of said corporation; that I know his signature, and his signature thereto is genuine; and that said Bond was duly signed, sealed and attested for and on behalf of said corporation by authority of its governing body.

\_\_\_\_\_  
Secretary (SEAL)

TO BE EXECUTED BY CORPORATE SURETY

Attest:

\_\_\_\_\_  
(Secretary)

\_\_\_\_\_  
(Corporate Surety)

\_\_\_\_\_  
(Business Address)  
\_\_\_\_\_

By: \_\_\_\_\_  
(Affix Corporate Seal)

\_\_\_\_\_  
(Attorney-In-Fact)

\_\_\_\_\_  
(Name of Local Agency)

\_\_\_\_\_  
(Business Address)  
\_\_\_\_\_

STATE OF FLORIDA

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared, \_\_\_\_\_ to me well known, who being by me first duly sworn upon oath, says that he is the attorney-in-fact for the \_\_\_\_\_ and that he has been authorized by \_\_\_\_\_ to execute the foregoing bond on behalf of the CONTRACTOR named therein in favor of the City of Hollywood, Florida.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public, State of Florida

My Commission Expires:

\*\*\*\*\*

APPROVED AS TO FORM:

APPROVED AS TO FINANCE:

By \_\_\_\_\_  
Douglas R. Gonzales  
City Attorney

By \_\_\_\_\_  
Stephanie Tinsley  
Financial Services Director

- END OF SECTION -

ATTACHMENT A  
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_  
Name Address Tel. No.

As Principal and \_\_\_\_\_  
Name Address Tel. No.

as Surety, are held and firmly bound to the CITY OF HOLLYWOOD, FLORIDA herein called the City, in the sum of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment of said sum we bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, for the faithful performance of a certain written contract dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into between the Principal and the City of Hollywood, Florida for the **Injection Well No. 2 Repair, (Project No. 23-9737/Bid No. IFB-143-24-JJ)**.

Which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

THE CONDITION of this bond is that if Principal promptly makes payments to all claimants defined in Section 255.05 (1), F.S., supplying Principal with labor, materials or supplies used directly or indirectly by principal in the prosecution of the work provided for in the Contract, then this bond shall be null and void and of no further force and effect; otherwise to remain in full force and effect.

Said surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or any other changes in or under contract documents and compliance or noncompliance with any formalities connected with the contract does not affect Surety's obligation under this bond and Surety waives notice of any such change, extension of time, alteration or addition to the terms of the Contract or any other changes, compliance, or noncompliance to the terms of the Contract or to the Work or to the Specifications.

This bond is furnished pursuant to the statutory requirements for bond on public works projects being Florida Statute 255.05. Claimants are hereby notified that the Statute 255.05(2) specifically requires that notice be given to Contractor within 45 days after beginning to furnish labor, materials or supplies for the prosecution of the work that claimants intend to look to the bond for protection. Further notice is hereby given claimants that written notice of nonpayment within ninety (90) days after performance of the labor or after complete delivery of the materials or supplies must be delivered to the Contractor and to the Surety. Further notice is hereby given that no action for labor, materials or supplies may be instituted against the Contractor or the Surety on the bond after one year for the performance of the labor or completion of delivery of the materials or supplies.

Without modifying the foregoing, this bond shall be construed as requiring of the principal and surety no more and no less than is specified in F.S. 255.050.

SIGNED AND SEALED, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**PRINCIPAL:**

ATTEST:

\_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_

\_\_\_\_\_  
(Title)

(SEAL)

**SURETY:**

\_\_\_\_\_  
(Surety)

ATTEST:

\_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_

\_\_\_\_\_  
(Attorney-in-Fact)

\*\*\*\*\*

APPROVED AS TO FORM:

APPROVED AS TO FINANCE:

By \_\_\_\_\_  
Douglas R. Gonzales  
City Attorney

By \_\_\_\_\_  
Stephanie Tinsley  
Financial Services Director

- END OF SECTION -

ATTACHMENT B

GENERAL CONDITIONS, PUBLIC UTILITIES

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**ATTACHMENT B  
GENERAL CONDITIONS, PUBLIC UTILITIES**

**CITY OF HOLLYWOOD, FLORIDA  
GENERAL CONDITIONS  
FOR CONSTRUCTION CONTRACTS**

ARTICLE 1 - DEFINITIONS

In the interpretation of these Contract Documents the following terms shall have the meaning indicated:

**ADDENDA** - Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Contract Documents.

**CHANGE ORDER** - A written order to CONTRACTOR executed in accordance with City procurement procedures, as amended authorizing an addition, deletion or revision in the work, or an adjustment in the Contract Price or the Contract Time, issued after the date of Award.

**CITY (OWNER)** - The City of Hollywood, Florida.

**COMMISSION** - The City Commission of the City of Hollywood, Florida, being the legislative body of the CITY as set forth in the City of Hollywood Charter.

**CONTRACT** - The written agreement between the CITY and the CONTRACTOR covering the work to be performed in accordance with the other Contract Documents which are attached to the Contract and made a part thereof.

**CONTRACTOR** - The person, firm, or corporation with whom the CITY has entered into the Contract.

**CONTRACT DOCUMENTS** - The Notice to Bidders, Instruction to Bidders, Proposal, Information Required of Bidders, all Bonds, Agreement, and all supporting documents, these General Requirements and Covenants, the Specifications, Drawings and Permits, together with all Addenda and Change Orders issued with respect thereto.

**CONTRACT PRICE** - Total monies payable by the CITY to the CONTRACTOR under the terms and conditions of the Contract Documents.

**CONTRACT TIME** - The number of days agreed to in the Proposal, commencing with the date of the Notice to Proceed for completion of the work.

**CONTROL** - shall mean having the primary power, direct or indirect, to influence the management of a business enterprise. The controlling party must have the demonstrable ability to make independent and unilateral business decisions on a day-to-day basis, as well as the independent and unilateral ability to make decisions which may influence and chart the future course of the business.

**DATE OF SUBSTANTIAL COMPLETION** - The date when the work on the project, or specified part thereof, is substantially completed in accordance with the Contract Documents, such that

the CITY can occupy or utilize the project or specified part thereof for the use and purpose for which it was intended as determined and accepted by the Engineer.

DAYS - Calendar days of 24 hours measured from midnight.

DRAWINGS - The drawings which show the character and scope of the work to be performed and which have been prepared by the DESIGN ENGINEER approved by ENGINEER and are referred to in and are a part of the Contract Documents.

ENGINEER - The Director of Public Utilities of the CITY of Hollywood, Florida, or his authorized designee.

EXCUSABLE DELAY - Delay caused by the CITY, hurricane, tornadoes, fires, floods, epidemics or labor strikes.

GENERAL CONDITIONS - That segment of the Contract Specifications incorporating the Provisions common to all CITY Construction Contracts.

INEXCUSABLE DELAY - Any delay caused either (i) by events or circumstances within the control of the CONTRACTOR not specified in the definition of excusable delay.

INSPECTOR - The authorized field representative of the ENGINEER.

LIQUIDATED DAMAGES - The amount prescribed in the General Requirements to be paid the CITY, or to be deducted from any payments due the CONTRACTOR for each day's delay in completing the whole or any specified portion of the work beyond the Contract Time.

NOTICE OF AWARD - The written notice by the CITY to the successful Bidder stating that upon his execution of the Agreement and other requirements as listed therein within the time specified the CITY will sign and deliver the Agreement.

NOTICE TO PROCEED - A written notice by the ENGINEER to the CONTRACTOR fixing the date on which the Contract Time will commence to run and on which the CONTRACTOR shall start to perform his obligation under the Contract Documents.

"OR EQUAL" - Equivalent or superior in construction, efficiency and effectiveness to a type, brand, model or process called out in the Contract Documents to establish a basis of quality as determined by the ENGINEER.

SHOP DRAWINGS - All certified affidavits, drawings, diagrams, illustrations, schedules and other data which are specifically prepared by CONTRACTOR, a Subcontractor, manufacturer, fabricator, supplier or distributor to illustrate some portion of the work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a manufacturer, fabricator, supplier or distributor and submitted by CONTRACTOR to illustrate material or equipment for some portion of the WORK.

SPECIFICATIONS - Division 1 through 17 of these Contract Documents, consisting of administrative details and written technical descriptions of materials, equipment, standards and workmanship.

SUPPLEMENTARY CONDITIONS - Division 1 of the Contract Specifications incorporating the provisions peculiar to a specific project.

SUBCONTRACTOR - An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the work

SURETY - The person, firm or corporation responsible for the Bidder's acts in the execution of the Contract, or which is bound to the CITY with and for the CONTRACTOR to insure performance of the Contract and payment of all obligations pertaining to the work.

WORK - All the work materials or products specified, indicated, shown or contemplated in the Contract Documents to construct and complete the improvement, including all alterations, modifications, amendments or extension thereto made by Change Orders.

## ARTICLE 2 - ORGANIZATIONAL ABBREVIATIONS

Abbreviations of organizations which may be used in these Specifications are:

AASHTO:	American Association of State Highway and Transportation Officials
ACI:	American Concrete Institute
AIA:	American Institute of Architects
AISC:	American Institute of Steel Construction
AITC:	American Institute of Timber Construction
ANSI:	American National Standards Institute
APWA:	American Public Works Association
ASTM:	American Society for Testing and Materials
ASCE:	American Society of Civil Engineers
ASME:	American Society of Mechanical Engineers
ASHRAE:	American Society of Heating, Refrigerating and Air Conditioning Engineers
AWPA:	American Wood Preservers Association
AWWA:	American Water Works Association
AWS:	American Welding Society
BCEQCB:	Broward County Environmental Quality Control Board
CRSI:	Concrete Reinforcing Steel Institute
FDEP:	Florida Department of Environmental Protection
FDNR:	Florida Department of Natural Resources
FDOT:	Florida Department of Transportation
FPL:	Florida Power and Light
IEEE:	Institute of Electrical and Electronic Engineers
NACE:	National Association of Corrosion Engineers
NCPI:	National Clay Pipe Institute

NEC: National Electrical Code

NEMA: National Electrical Manufacturers Association

NFPA: National Fire Protection Association

OSHA: Occupational Safety and Health Act

PCI: Prestressed Concrete Institute

SFBC: South Florida Building Code, Broward Edition, Latest Revision

SFWMD: South Florida Water Management District

SSPC: Structural Steel Painting Council

UL: Underwriters' Laboratories, Inc.

UNCLE: Utility Notification Center for Location before Excavation (1-800-432-4770)

USEPA: United States Environmental Protection Agency

USGS: United States Geological Survey

WWEMA: Water and Wastewater Equipment Manufacturers Association

## ARTICLE 3 - MISCELLANEOUS PRELIMINARY MATTERS

### 3.1 Contract Document Discrepancies:

Any discrepancies, conflicts, errors or omissions found in the Contract Documents shall be promptly reported to the ENGINEER who will issue a correction, if necessary, in writing. The CONTRACTOR shall comply with any corrective measures regarding the same as prescribed by the ENGINEER.

### 3.2 Submissions:

Unless indicated otherwise in the Contract Documents, within seven days subsequent to the CONTRACTOR executing and submitting the required documents of Article 2.13 in Section II - Special Terms and Conditions, the CONTRACTOR shall submit to the ENGINEER an estimated progress schedule indicating the starting and completion days of the various stages of the work. A preliminary Schedule of Values and a preliminary schedule of Shop Drawing submissions may also be required by Section 01300 of Division 1 - General Requirements.

### 3.3 Pre-construction Conference:

The Contractor will be required to attend a mandatory Pre- Construction Conference for review of the above schedules, establishing procedures and establishing a working understanding among the parties as to the work.

### 3.4 Contract Time:

The Contract Time will commence on the date of the Notice to Proceed and shall exist for the total number of days as specified in Attachment C – Supplementary General Conditions, Section 1, Project Schedule as modified by any subsequent Change Orders, Unless the CONTRACTOR fails to complete the requirements of Section II - Special Terms and Conditions, the additional time in days (including weekends) required to correctly complete the documents will be deducted by CITY from the Contract Time specified by the CONTRACTOR in this Proposal.

### 3.5 Computation of Time:

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

### 3.6 Commencement of Work:

The CONTRACTOR shall not perform work at the site prior to the date of the Notice to Proceed.

### 3.7 Extension of Contract Time:

Extensions of time shall be based solely upon the effect of delays to the work as a whole. Extensions of time shall not be granted for delays to the work, unless the CONTRACTOR can clearly demonstrate, through schedule analysis, that the delay to the work as a whole arose in accordance with Article 11, Changes in Contract Time and that such delays did or will, in fact, delay the progress of work as a whole. Time extensions shall not be allowed for delays to parts of the work that are not on the critical path of the Project schedule. Time extensions shall not be granted until all float or contingency time, at the time of the delay, available to absorb specific delays and associated impacts, is used.

3.8    Notice and Service Thereof:

All notices, demands, requests, instructions, approvals and claims shall be in writing. Notices, demands, etc. shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the business address as defined at the Pre-Construction Conference.

3.9    Separate Contract:

The CITY reserves the right to let other Contracts in connection with this Project. The CONTRACTOR shall afford other Contractors reasonable opportunity for the introduction and storage for their materials and the execution of their work and shall properly connect and coordinate his work with theirs.

3.10   Assignments of Contract:

No assignment by the CONTRACTOR of the Contract or of any part thereof, or any monies due or to become due thereunder shall be made.

3.11   Patents:

It is mutually understood and agreed that without exception, Contract prices are to include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. It is the intent that whenever the Contractor is required or desired to use any design, device, material or process covered by letters, patent, or copyright, the right for such use shall be provided for by suitable legal agreements with the Patentee or Owner and a copy of this agreement shall be filed with the ENGINEER. However, whether or not such an agreement is made or filed as noted, the CONTRACTOR and the Surety in all cases shall indemnify and save harmless the CITY from any and all claims for infringement by reason of the use of any such patented design, device, material or process, to be performed under the Contract, and shall indemnify the said CITY from any costs, expenses, and damages which it may be obliged to pay, by reason of such infringement, at any time during the prosecution or after the completion of the work.

### 3.12 Federal Excise Tax:

The forms needed for applying for exemption certificates for materials and equipment, normally subject to the Federal Excise Tax, may be obtained from the Director of Internal Revenue, Jacksonville, Florida.

The CONTRACTOR is solely responsible for obtaining the desired exemption certificate from the Federal Government.

### 3.13 Savings Due to Excise Tax Exemptions:

The Bidder shall include in the Bid price the estimated cost of all goods, supplies and equipment which will be incorporated in the Work and the taxes that the Bidder would be required to pay if the Bidder were to purchase such goods, supplies or equipment. By subsequent Change Order(s), the parties shall reduce the Bid price to reflect any goods, supplies and equipment purchased directly by City and the resulting tax savings due to City's exemption from Excise Taxes.

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the laws and regulations of the State of Florida and its political subdivisions. Consistent with the tax exemption for municipalities provided by state law, CITY and CONTRACTOR shall jointly operate so that CITY may purchase directly, goods, supplies and equipment which will be incorporated into the Work. The goods, supplies and equipment that will be purchased by CITY shall be approved in advance by the parties.

With respect to all goods, supplies and equipment to be purchased by CITY, CONTRACTOR shall, on behalf of CITY, take all actions necessary and appropriate to cause all purchases to be made and shall be responsible for delivery of all such goods, supplies and equipment, including verification of correct quantities and documents or orders, coordination of purchases and delivery schedules, sequence of delivery, unloading, handling and storage through installation, obtaining warranties and guarantees required by the Contract Documents, inspection and acceptance of the goods, supplies and equipment at the time of delivery, and other arrangements normally required for the particular goods, supplies or equipment purchased. Unless otherwise directed by CITY, such actions shall also include taking the lead in efforts to resolve any and all disputes with the vendor. CONTRACTOR shall ensure that each vendor of goods, supplies and equipment purchased by CITY agrees in writing to the terms and conditions contained in CITY'S standard purchase order, which terms and conditions are set forth in Attachment C - Supplementary General Conditions of the Contract Documents. Even though CITY may purchase such goods, supplies and equipment, the goods, supplies and equipment shall be stored at the site in the same manner as goods, supplies and equipment purchased by CONTRACTOR.

CONTRACTOR shall hold CITY harmless from delays in manufacturing, delivery, and other unforeseen conditions that may arise as part of the procurement of CITY-purchased goods, supplies and equipment.

### 3.14 Overtime Work:

The CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of eight hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the ENGINEER in writing. Additional compensation will be paid the CONTRACTOR for overtime work only in the event extra work is ordered by the ENGINEER and the Change Order specifically authorizes the use of overtime work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime work of a similar nature in the same locality.

### 3.15 Inspections and Testing during Overtime:

The CONTRACTOR shall establish a normal work schedule which does not exceed eight hours per day in a normal work day nor 40 hours per week in a normal work week. Normal work days shall be Monday through Friday. Whenever CONTRACTOR's work requires scheduled overtime, unless such overtime work is specifically required by the Contract Documents, CONTRACTOR shall reimburse the CITY for the extra costs incurred for providing Inspectors. Overtime shall be scheduled only after CONTRACTOR obtains written permission from the CITY. A change order shall be prepared to cover the CITY costs. Inspector costs shall be charged to the CONTRACTOR at a rate of \$80.00 per hour with a minimum of four hours charged for weekends and holidays. If the CONTRACTOR has an overtime work force size of fifty or more persons a second Inspector will be required and the costs for two Inspectors will be \$160.00 per hour.

### 3.16 Nights, Sunday or Holiday Work:

Except upon specific permission of the ENGINEER, the CONTRACTOR shall not perform any work on Sundays or on legal State or Municipal holidays. In accordance with City of Hollywood Code of Ordinances, Section 21.49, no work between 6:00 p.m. and 8:00 a.m. will be permitted, except in case of an emergency, that violates Section 21.49 concerning noise levels. All costs of testing and inspection performed during night, Sunday or holiday work shall be borne by the CONTRACTOR. The CONTRACTOR shall notify all regulatory agencies, including but not limited to the City Police Department, Fire Department, and Code Enforcement Department.

### 3.17 Injury or Damage Claims:

Should CITY or CONTRACTOR suffer injury or damage to their person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage. However, nothing herein shall be deemed to affect the rights, privileges and immunities of City as are set forth in Section 768.28, Florida Statutes.

## ARTICLE 4 - CONTRACT DOCUMENTS

### 4.1 Intent:

The Contract Documents comprise the entire Agreement between the CITY and CONTRACTOR concerning the work. The Contract Documents can be altered only by Change Order. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. It is the intent of the Contract Documents that the CONTRACTOR, for due consideration, shall furnish all equipment, material, supervision and labor, (except as may be specifically noted otherwise) required or necessary to complete the work in total accordance with said Documents. It is the intent of the Drawings and Specifications to describe the Project to be constructed in accordance with the Contract Documents. Any work that may reasonably be inferred from the Drawings or Specifications as being required in order to produce the intended result shall be supplied whether or not it is specifically called for.

### 4.2 Order of Precedence of Contract Documents:

In resolving differences resulting from conflicts, errors or discrepancies in any of the following Contract Documents, the order of precedence shall be as follows:

1. Permits
2. Change Orders
3. Contract Agreement
4. Specification
5. Drawings

Within the Specifications the order of precedence is as follows:

1. Addenda
2. Section I - Introduction
3. Section II – Special Terms and Conditions
4. General Terms & Conditions
5. Attachment C- Supplementary General Conditions
6. Attachment B - General Conditions
7. Division 1, General Requirements
8. Technical Specifications
9. Referenced Standard Specifications

With reference to the Drawings the order of precedence is as follows:

1. Figures Govern over Scaled Dimensions
2. Detail Drawings Govern over General Drawings
3. Change Order Drawings Govern over Contract Drawings
4. Contract Drawings Govern over Standard or Shop Drawings

### 4.3 Reference To Standards:

Any reference to standard Specifications, manuals or codes of any organization or governmental authority shall mean the latest edition, in effect as of the Bid Opening Date.

## ARTICLE 5 - BONDS AND INSURANCE

### 5.1 Bid Guarantee:

Bidders maybe required to submit a Bid Guarantee in an amount indicated in the SECTION II - SPECIAL TERMS AND CONDITIONS. This Guarantee may be a Certified or Cashier's Check on a solvent National or State Bank, or a Bid Bond written by a Surety licensed to do business in Florida and rated at least "A", Class X in the latest edition of "Best's Key Rating Guide" published by A.M. Best Company.

### 5.2 Performance and Payment Bond:

CONTRACTOR shall furnish Performance and Payment Bonds, in amounts equal to the Contract Price as Security for the faithful performance and payment of CONTRACTOR's obligations. The Bond or Bonds shall remain in effect one year after the date of final payment. The Surety must be qualified as specified above in Paragraph 5.1. However, the City reserves the right to require additional bonds as set forth in Article 5 of the Contract.

### 5.3 Signatures:

All Bonds signed by an Agent must be accompanied by a Certified copy of the authority to act, with said copy having been signed (not typed nor printed) by an Officer of the Surety and carrying the seal of the Surety.

### 5.4 Insurance Coverage:

Within ten days from Notice of Award the CONTRACTOR shall purchase and maintain such insurance as specified in Article 2.25 of Section II – Special Terms and Requirements as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR's operations under the Contract or Contract Documents, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

### 5.5 Certificates of Insurance:

Within ten days of award, the Contractor shall obtain a Certificate of Insurance reflecting the necessary coverages as required by the Contract Documents. Certificates of Insurance shall contain a provision that coverages afforded under the policies will not be canceled until at least 30 days prior written notice has been given to the CITY. The City of Hollywood must be named as additional insured on all coverage with the exception of Workmen's Compensation. Policies shall be issued by companies authorized to do business under the Laws of the State of Florida. Policyholders and Financial Ratings must be no less than "A" and Class X respectively in the latest edition of "Best Key Rating Guide", published by A.M. Best Company.

5.6    Insurance Limits of Liability:

The insurance required by this Article shall be written for no less than the level of liability specified in "Insurance Requirements", Section 2 of the Supplementary General Conditions, or required by law, whichever is greater. The insurance shall include contractual liability insurance applicable to the CONTRACTOR's obligations under this contract.

The level required in Section 2 of the Supplementary General Conditions will not be reduced for any reason.

## ARTICLE 6 - AVAILABILITY OF LAND; REFERENCE POINTS

### 6.1 Rights-of-Way:

Lands or Rights-of-Way for the work to be constructed under the Contract will be provided by the CITY. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or Rights-of-Way provided. Any additional lands or Rights-of-Way required for construction operations shall be provided by the CONTRACTOR at his own expense; provided, that the CONTRACTOR shall not; and the CITY nor the ENGINEER shall not be liable for any claims or damages resulting from the CONTRACTOR's unauthorized trespass or use of any such properties.

### 6.2 Permits:

When required by Article 2.16 of the Section II – Special Terms and Conditions, the CONTRACTOR shall secure, from the agencies having jurisdiction, the necessary permits to create obstructions, to make excavations if required under the Contract, and to otherwise encroach upon Rights-of-Way, and to present evidence to the ENGINEER that such permission has been granted, before work is commenced. Regulations and requirements of all agencies concerned shall be strictly adhered to in the performance of the Contract. The enforcement of such requirements under the Contract shall not be made the basis for additional compensation.

### 6.3 Lines and Grades:

The CONTRACTOR shall furnish all grades and all other lines required for the proper execution of the work.

## ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

### 7.1 Laws/Regulations to Be Observed:

The CONTRACTOR shall familiarize himself and comply with all Federal, State, County and CITY laws, by-laws, ordinances or regulations controlling the action or operation of those engaged or employed in the work or affecting material used, and govern himself in accordance with them. He shall indemnify and save harmless the CITY and all of its officers, agents and employees against any claims or liability arising from or based on the violation of any such laws, by-laws, ordinances, regulations, orders or decrees, whether by himself or his employees or Subcontractors.

### 7.2 Indemnification of City:

- (a) Refer to ARTICLE 1.46 – INDEMNIFICATION AND HOLD HARMLESS AGREEMENT of Section IV – General Terms and Conditions.
- (b) Refer to ARTICLE 1.47 – PATENT AND COPYRIGHT INDEMNIFICATION of Section IV – General Terms and Conditions.
- (c) The provisions of (a) and (b) above shall survive the expiration or earlier termination of the Contract Documents.

### 7.3 Guarantee of Payments:

The CONTRACTOR guarantees the payments of all just claims for materials, supplies, tools, labor and other just claims against him, or any Subcontractor in connection with this Contract, and his bond will not be released by final acceptance and payment by the CITY unless all such claims are paid or released.

### 7.4 Permits and Licenses:

The CONTRACTOR shall obtain all permits and licenses required by the Contract Documents. A copy of the permit(s) and such conditions and requirements thereon are a part of the Contract Documents. Failure to obtain such permits or licenses shall subject the CONTRACTOR to the provisions of the South Florida Building Code, Broward Edition.

## 7.5    Emergencies:

In emergencies affecting the safety or protection of persons or the work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or CITY, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice of any significant changes in the work or deviations from the Contract Documents caused thereby.

## 7.6    Substitutes or "Or Equal":

### A.      Substitutes or "Or-Equal" Materials or Equipment:

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by the ENGINEER if sufficient information submitted by the CONTRACTOR to allow the ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named. The ENGINEER will be allowed 30 days within which to evaluate each proposed substitute. The ENGINEER will be the sole judge of acceptability, and NO SUBSTITUTE WILL BE ORDERED, INSTALLED OR UTILIZED WITHOUT THE ENGINEER'S PRIOR WRITTEN ACCEPTANCE which will be evidenced by either a Change Order or an approved set of Shop Drawings. Requests for review of substitute items of material and equipment will not be accepted by the ENGINEER from anyone other than the CONTRACTOR. The procedure for review by the ENGINEER is as follows:

If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. In addition, the application shall

1. State that the evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of completion on time.
2. State whether or not acceptance of the substitute for use in the WORK will require a change in any of the Contract Documents to adapt design to the proposed substitute. The CONTRACTOR shall be responsible for any extra design adaptation costs associated with a proposed substitute.
3. State whether or not incorporation or use of the substitute in connection with the work is subject to payment of any license fee or royalty.
4. Provide complete substitute identification and description, including manufacturer's and local distributor's name and address, performance and test data, and reference standards.

5. Provide samples, as required by ENGINEER.
  6. Provide name and address of similar projects on which the proposed substitute has been used, and date of installation.
  7. Identify all variations of the proposed substitute from that specified.
  8. Indicate available maintenance, repair and replacement service.
  9. Submit an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other Contractors affected by the resulting change. The CONTRACTOR shall be responsible for the costs of redesign and claims of other Contractors.
  10. Provide any additional data about the proposed substitute as the ENGINEER may require of the CONTRACTOR.
- B. Substitute means, method, technique, sequence or procedure of construction:
- If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the ENGINEER, if the CONTRACTOR submits sufficient information to allow the ENGINEER to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by the ENGINEER will be similar to that provided in Paragraph 7.6 A.
- C. The CITY may require the CONTRACTOR to furnish at the CONTRACTOR's expense, a special performance guarantee or other surety with respect to any substitute.
- D. The ENGINEER will record time required by the ENGINEER and/or the ENGINEER's consultants in evaluating substitutions proposed by the CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not the ENGINEER accepts a proposed substitute, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR THE CHARGES OF THE ENGINEER AND THE ENGINEER'S CONSULTANTS FOR EVALUATING EACH PROPOSED SUBSTITUTE.
- E. Any and all costs which result from changes to/adaptations of the work shall be paid by the CONTRACTOR including but limited to design, materials, installation, etc.

## 7.7 Shop Drawings:

Shop Drawing submittals shall be as follows:

- A. The CONTRACTOR shall submit a sufficient number of copies of each Shop Drawing to enable the ENGINEER to retain three copies unless additional copies are specified in the Contract Documents. Resubmissions of Shop Drawings shall be made in the same quantity until final approval is obtained.
- B. The CONTRACTOR shall submit Shop Drawings for all equipment, apparatus, machinery, fixtures, piping, fabricated structures, manufactured articles and structural components Manufacturer's Certified Affidavit that the item supplied complies with the design Specifications, and all other submittal requirements.
- C. Shop Drawings for structural components, electrical or mechanical systems shall be Certified by a Registered Engineer of the discipline involved.
- D. The CONTRACTOR shall thoroughly review and check the Shop Drawings, and each and every copy shall show his approval thereon. If the Shop Drawings show or indicate departures from the Contract requirements, the CONTRACTOR shall make specific mention thereof in his letter of transmittal. Failure to point out such departures shall not relieve the CONTRACTOR from his responsibility to comply with the Drawings and Specifications.
- E. No approval will be given to partial submittals of Shop Drawings for items which interconnect and/or are interdependent. It is the CONTRACTOR's responsibility to assemble the Shop Drawings for all such interconnecting and/or interdependent items, check them himself and then make one submittal to the ENGINEER along with his comments as to compliance, non-compliance, or features requiring special attention.
- F. If catalog sheets or prints of manufacturer's standard drawings are submitted as Shop Drawings, any additional information or changes on such Drawings shall be typewritten or lettered in ink.
- G. The CONTRACTOR shall keep one set of Shop Drawings marked with the ENGINEER's approval at the job site at all times.
- H. Where a Shop Drawing or sample is required by the Specifications, no related work shall be commenced until the submittal has been reviewed and approved by the ENGINEER.
- I. Approval of the Shop Drawings shall constitute approval of the subject matter thereof only, and not of any structure, material, equipment or apparatus shown or indicated. The approval of the Shop Drawings will be general and shall not relieve the CONTRACTOR of responsibility for the accuracy of such Drawings, nor for the proper fitting and construction of the work, nor for the furnishing of materials or work required by the contract and not indicated on the Drawings. Approval shall not relieve the CONTRACTOR from responsibility for errors or omissions of any sort on the Shop Drawings.

7.8

Personnel:

A. Supervision and Superintendence:

1. The CONTRACTOR shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but the CONTRACTOR shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. The CONTRACTOR shall be responsible to see that the finished work complies accurately with the Contract Documents.
2. The CONTRACTOR shall keep on the work at all times during its progress a competent resident Superintendent fluent in both oral and written communication in the English language, who shall not be replaced without written notice to the ENGINEER except under extraordinary circumstances. The Superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the Superintendent shall be as binding as if given to the CONTRACTOR.

B. Workforce:

1. None but skilled workers shall be employed on work requiring special qualifications. When required in writing by the ENGINEER, the CONTRACTOR or any Subcontractor shall discharge any person who is, in the opinion of the ENGINEER, incompetent, disorderly or otherwise unsatisfactory, and shall not again employ such discharged person on the work except with the consent of the ENGINEER. Such discharge shall not be the basis of any claim for damages against the CITY or any CITY agents.
2. With respect to all skilled, semi-skilled and unskilled workers employed on the Project under this Contract, preference in employment shall be given to persons residing in Hollywood when such persons are available and qualified to perform the work to which the employment relates. No person shall be employed in violation of the State or National Labor Laws. No person under the age of 16 years shall be employed on a Project under the Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed on the Project under this Contract; provided that this shall not operate against the employment of physically handicapped persons, otherwise employable where such persons may be safely assigned to work which they can ably perform. No person currently serving sentences in a penal or correctional institution and no inmate of an institution for

mentally defective shall be employed on a Project under this Contract without specific approval of the ENGINEER.

3. No discrimination shall be made in the employment of persons on the work by the CONTRACTOR or by any Subcontractor under him, because of the race, color, sex, age or religion of such persons, and there shall be full compliance with the provisions of applicable State and Federal laws in this regard.

7.9 Safety and Protection:

A. Federal Safety and Health Regulations:

The CONTRACTOR and Subcontractors shall comply with the provisions of the Occupational Safety and Health Standards, promulgated by the Secretary of Labor under the "Occupational Safety and Health Act of 1970".

B. Responsibilities:

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

1. All employees on the work and other persons who may be affected thereby.
2. All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocating or replacement in the course of construction.

C. Designated Safety Officer:

The CONTRACTOR shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR's Superintendent unless otherwise designated in writing by the CONTRACTOR to the ENGINEER.

D. Protection of the Work:

Until acceptance of the work by the CITY, it shall be under the charge and in care of the CONTRACTOR and he shall take every necessary precaution against injury or damage to the work by action of the elements or from the execution or from the non-execution of the work. The CONTRACTOR shall rebuild, restore and make good, at his own expense, all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance.

7.10 Traffic Control, Public Safety and Convenience:

- A. The CONTRACTOR shall at all times conduct his work so as to assure the least possible obstruction to traffic and inconvenience to the general public, and provide adequate protection of persons and property in the vicinity of the work.
- B. WHEN THE NORMAL FLOW OF TRAFFIC WILL BE IMPAIRED OR DISRUPTED IN ANY MANNER ON ANY STREET, THE CONTRACTOR SHALL NOTIFY THE POLICE TRAFFIC SERGEANT AT 921-3610 AT LEAST 48 HOURS IN ADVANCE.
- C. Streets shall not be closed, except when and where directed by the ENGINEER, and whenever a street is not closed the work must be conducted with the provision for safe passageway for traffic at all times. The CONTRACTOR shall make all necessary arrangements concerning maintenance of traffic and selection of detours required.
- D. When permission has been granted to close an existing roadway, or portion thereof, the CONTRACTOR shall furnish and erect signs, barricades, lights, flags and other protective devices as necessary subject to the approval of the ENGINEER. From sunset to sunrise, the CONTRACTOR shall furnish and maintain as many yellow lights as the ENGINEER may direct.
- E. During working hours the CONTRACTOR shall furnish watchmen in sufficient numbers to protect and divert the vehicular and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with this requirement will result in the ENGINEER shutting down the work until the CONTRACTOR shall have provided the necessary protection.
- F. No separate payment will be made for such signs, barricades, lights, flags, watchmen or other protective devices as required, with all costs thereof deemed to be included in the prices bid for the various items scheduled in the bid.
- G. Sidewalks, gutters, drains, fire hydrants and private drives shall, in so far as practicable, be kept in condition for their intended uses. While the work is actually going on at any location, as much as half the street width at that location may be barricaded to exclude traffic entirely, but street traffic shall not be obstructed needlessly. Fire hydrants on or adjacent to the work shall be kept accessible to fire apparatus at all times, and no material or obstruction shall be placed within ten feet of any such hydrant.
- H. Construction material stored upon the public street shall be placed so as to cause as little obstruction to the general public as is reasonably possible.

#### 7.11 Use of Explosives:

When the use of explosives is necessary for the prosecution of the work, the CONTRACTOR shall observe the utmost care so as not to endanger life or property, and whenever directed, the number and size of charges shall be limited. All explosives shall be stored in a secure manner and all such storage places shall be marked clearly "DANGEROUS EXPLOSIVES" and shall be in care of a competent watchman at all times. The CONTRACTOR must familiarize himself with all laws and ordinances pertaining thereto, and govern himself and his employees accordingly.

#### 7.12 Loading of Structures:

The CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the CONTRACTOR subject any part of the work or adjacent property to stresses or pressures that will endanger it.

#### 7.13 Concerning Subcontractors:

- A. The CONTRACTOR, with his own forces, shall perform no less than 25% of the work as determined by the Contract price. Each Subcontractor shall be properly licensed for the type of work he is to perform.
- B. A copy of each Sub-Contract shall be filed promptly with the ENGINEER upon request. Each Sub-Contract shall contain a reference to the Contract between the CITY and the CONTRACTOR, and the terms and conditions of the Contract shall be made a part of each Sub-Contract. Each Sub-Contract shall provide for annulment of same by the CONTRACTOR upon written order of the ENGINEER if the Subcontractor fails to comply with the requirements of this Contract.
- C. The CONTRACTOR shall be responsible to the CITY and ENGINEER for the acts and omissions of his Sub-Contractors and their employees to the same extent as he is responsible for the acts and omissions of his own employees. Nothing contained in this Contract shall create any contractual relationship between any Subcontractor and the CITY or ENGINEER nor relieve the CONTRACTOR of any liability or obligation under this Contract.

#### 7.14 Materials and Equipment:

- A. Material for the Work:
  1. The CONTRACTOR shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the work.
  2. Unless otherwise specified, shown or permitted by the ENGINEER, all material and equipment incorporated in the work shall be new and of current manufacture. The ENGINEER may request the CONTRACTOR to furnish manufacturer's certificates to this effect.

3. The ENGINEER may require any or all materials to be subjected to test by means of samples or otherwise, at production points or after delivery. The CONTRACTOR shall afford such facilities as the ENGINEER may require for collecting and forwarding samples, which samples shall be furnished by the CONTRACTOR without charge. The CONTRACTOR shall furnish evidence satisfactory to the ENGINEER that the materials and finished articles have passed the required test prior to the incorporation of such materials and finished articles in the work. Unless otherwise provided, the cost of such inspection and testing shall be as provided in Article 12.2.
4. All packaged manufactured products for use on the work shall be delivered to the work in their original, unopened packages, bearing thereon the manufacturer's name and the brand name of the product.
5. Wherever any product or material is selected to be used on the work, all such products or material shall be of the same brand and manufacture throughout the work.
6. All equipment, tools and machinery used for handling material or executing any part of the work shall be maintained in a satisfactory working condition. All equipment utilized on any portion of the work shall be such that no injury to personnel, the work, adjacent property or other objects will result from its use.
7. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier or distributor, except as otherwise provided in the Contract Documents.

B. Storage of Materials:

1. All materials and equipment including that ordered by the CITY designed for permanent installation in the work shall be properly stored by the CONTRACTOR to insure protection against deterioration of any type. These materials shall be placed as to cause a minimum of inconvenience to other contractors on the work and to the public. The storage piles shall be arranged to facilitate inspections, and any deterioration shall be grounds for rejection.
2. Materials stored in public Rights-of-Way, shall be stored in such a manner so as to be compatible with the Traffic Control requirements set forth in Paragraph 7.10. Materials shall be stored so as not to deny access to public or private property. Stored materials shall be adequately marked with barricades and/or flashing warning lights, where necessary, so as to protect the materials from damage and to protect the public health, safety and welfare.
3. Lawns, grass plots or other private property shall not be used for storage purposes without written permission of the Owner or Lessee of that private

property. Should the CONTRACTOR desire to store equipment or materials of any kind on the property of the CITY, he must obtain permission from the ENGINEER. The CITY reserves the right to order materials to be removed or relocated in such approved storage areas, if necessary.

4. The protection of stored materials shall be the CONTRACTOR's responsibility and the CITY OF HOLLYWOOD shall not be liable for any loss of materials, by theft or otherwise, nor for any damage to the stored materials.

C. **Salvage of Materials and Equipment:**

The CITY reserves the right to retain title to all soil, sand, stone, gravel, equipment, machinery or any other material that was a part of the structure, site or Right- of-Way and which was developed from excavations or other operations connected with the work. The CONTRACTOR will be permitted to use in the work, without charge, any such material which meets the requirements of the Contract Documents. For that material which the CITY desires to retain the CONTRACTOR shall, at his expense, transfer to a site within the CITY as designated by the ENGINEER. That material which the CITY does not wish to retain shall be the property of the CONTRACTOR and removed from the site at CONTRACTOR's expense.

7.15 Temporary Utilities:

The CONTRACTOR shall provide and maintain at his own expense, all water, power, telephone and sanitary facilities as required to comply with State and/or local Codes and Regulations. If water, including that for testing is required, it is the CONTRACTOR's responsibility to arrange through the CITY Water Department for a water meter. A deposit to be paid by the CONTRACTOR is required for meter rental and all water shall be purchased at the prevailing rate.

7.16 Review of Records:

The CONTRACTOR shall allow and permit the ENGINEER or his duly authorized representative to inspect and review all payrolls, records of personnel, conditions of employment, invoice of materials, books of accounts and other relevant data and records pertinent to the CONTRACT and Sub-Contracts.

7.17 Use of Premises:

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits or required by the Contract Documents, and shall not interfere with the premises or operation of the City Utilities facilities with construction equipment or other materials or equipment. Construction which interferes with Plant Operations shall be fully coordinated and approved by the ENGINEER.

7.18 CONTRACTOR's Daily Reports:

Except where otherwise provided, the CONTRACTOR shall complete a daily report indicating manpower, major equipment, Subcontractors, etc., involved in the performance of the work. The daily report shall be completed on forms approved by the ENGINEER, and shall be submitted to the ENGINEER at the conclusion of each work day.

7.19 Record Documents:

The CONTRACTOR shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, Shop Drawings and samples at the site, in good order and annotated to show all changes made during the construction process. These shall be available to ENGINEER for examination and shall be delivered to ENGINEER upon completion of the work.

7.20 Cleanliness of the Site:

During the progress of the work, The CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work. At the completion of the work the CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials, and shall leave the site clean and ready for occupancy by the CITY. The CONTRACTOR shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents.

7.21 Dust Control:

It shall be the CONTRACTOR's responsibility to control dust by watering as directed by the ENGINEER. The water used shall be paid for by the CONTRACTOR. Should the CONTRACTOR fail to control dust to the satisfaction of the ENGINEER, the CITY will control the dust by whatever means the CITY desires and the CONTRACTOR shall pay all expenses incurred by the CITY associated with the control of the dust.

7.22 Continuing the Work:

The CONTRACTOR shall carry on the work and maintain the Progress Schedule during all disputes or disagreements with the CITY. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the CITY may otherwise agree in writing.

7.23 Indemnification:

In consideration of the amount listed in the Bid Form and other valuable consideration, the Contractor shall defend, indemnify and save harmless the CITY, its officers, agents, and employees from or on account of any personal injury, loss of life or damage to property received or sustained by any person or persons during or on account of any operations connected with the construction of this Project; or by or in consequence of any negligence (excluding negligence of the CITY), in connection with the same; or by use of any improper materials or by or on account of any use of any improper materials or by or on account of any act or omission of the said Contractor or his subcontractor, agents, servants or employees. Contractor agrees to indemnify and save harmless the

CITY against any liability arising from or based upon the violation of any federal, state, county or city laws, by-laws, ordinances or regulations by the Contractor, his subcontractor, agents, servants or employees. Contractor further agrees to indemnify and save harmless the CITY from all such claims and fees, and from any and all suits and actions of every name and description that may be brought against the CITY on account of any claims, fees, royalties, or costs for any invention or patent, and from any and all suits and actions that may be brought against the CITY for the infringement of any and all patents or patent rights claimed by any person, firm, or corporation.

The indemnification provided above shall obligate the Contractor to defend at his own expense or to provide for such defense, at the CITY's option, any and all claims or liability and all suits and actions of every name and description that may be brought against the Owner which may result from the operations and activities under this Contract whether the construction operations be performed by the Contractor, his subcontractor or by anyone directly or indirectly employed by either.

Nothing in this indemnification shall be deemed to affect the rights, privileges or immunities of the CITY as set forth in Section 768.28, Florida Statutes.

The CITY will pay to the Contractor the specific consideration, in the amount stated in the Bid Form. The Contractor shall acknowledge the receipt of payment and other good and valuable consideration from the Owner which has been paid to him as specific consideration for the indemnification provided herein and in accordance with the provisions of Chapter F.S.A., Section 725.06.

## ARTICLE 8 - CITY'S RESPONSIBILITIES

### 8.1 Communications:

The CITY shall issue all communications to the CONTRACTOR through the ENGINEER.

### 8.2 Furnish Contract Documents:

The CITY shall furnish the number of Contract Documents as specified in the Supplementary General Conditions to the CONTRACTOR at no cost. Referenced Standard Specifications Manuals, guidebooks, etc., will not be provided.

### 8.3 Furnish Right-of-Way:

The CITY shall furnish the necessary land or Right-of-Way on which the work is to be accomplished, and will provide lines and grades as specified in Article 6.

### 8.4 Timely Delivery of Materials:

The CITY shall be responsible for the delivery of any CITY furnished material, equipment or labor as specified in the Contract Documents.

## ARTICLE 9 - ENGINEER'S STATUS

### 9.1 Authority of the Engineer:

- A. The general supervision of the execution of this Contract is vested in the ENGINEER who is the CITY's sole representative during the construction period. The instructions of the ENGINEER are to be strictly and promptly followed in every case. The CONTRACTOR's representative (Article 7.8 A. 1.) shall be responsible for the execution of any instructions given by the ENGINEER during the absence of the CONTRACTOR.
- B. The ENGINEER is the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work. Claims, disputes and other matters relating to the acceptability of work or requirements of the Contract Documents shall be referred in writing to the ENGINEER within 15 days of the event, with a request for a formal decision, which the ENGINEER will render in writing within a reasonable time. This rendering of a decision by the ENGINEER will be a condition precedent to any exercise by the CITY or CONTRACTOR of rights or remedies as either may otherwise have under the Contract Documents or at law in respect to any such claim, dispute or other matter.
- C. The ENGINEER will issue with reasonable promptness any written clarifications or interpretations of the Contract Documents as he shall deem necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If, as a result of a clarification or interpretation, either the CONTRACTOR or ENGINEER believes a Change Order is justified, it shall be submitted.
- D. The ENGINEER has approval authority over the acceptability of all material or equipment furnished, Shop Drawings, Change Orders, work performed and the rate of progress of the work. Verification of the quantities of work performed for pay purposes is the responsibility of the ENGINEER.
- E. The ENGINEER also has the authority to disapprove or reject work which is defective, and may require special inspection or testing of the work, whether or not it is fabricated, installed or completed.
- F. The ENGINEER has the authority to suspend the work wholly or in part for such period or periods as may be deemed necessary, due to the unsuitable prosecution of the work, or for such time as is necessary due to failure on the part of the CONTRACTOR to carry out orders given or perform any or all provisions of the Contract. The CONTRACTOR shall not suspend the work and shall not remove any equipment, tools, lumber or other materials without the written permission of the ENGINEER.

## 9.2 Access to the Work:

The ENGINEER is to have free access to the materials and work at all times for laying out, measuring or inspecting same, and the CONTRACTOR is to afford him all necessary facilities and assistance for so doing.

## 9.3 Limitations on The ENGINEER's Responsibilities:

- A. Neither the ENGINEER's authority to act under this Article or elsewhere in the Contract Documents nor any decision made by the ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any manufacturer, fabricator, supplier or distributor or any of their agents or employees or any other person performing any of the work.
- B. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used, to describe requirement, direction, review or judgment of the ENGINEER as to the work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that the ENGINEER has authority to supervise or direct performance of the work.
- C. The ENGINEER will not be responsible for the CONTRACTOR's means, methods, techniques, sequences or procedures of construction, nor the safety precautions and programs incident thereto, and the ENGINEER will not be responsible for the CONTRACTOR's failure to perform the work in accordance with the Contract Documents.
- D. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR or of any Subcontractors, or of the agents or employees of any CONTRACTOR or subcontractor, or of any other persons at the site or otherwise performing any of the work.

## 9.4 Inspectors:

- A. Inspectors employed by the CITY assist the ENGINEER in ascertaining the work conforms to the Contract Documents and are authorized to inspect all work done and material furnished as representatives of the ENGINEER. Inspectors shall be stationed at the site of the work to report to the ENGINEER as to the progress of the work and the quality of workmanship and material.
- B. In case of any dispute arising between the CONTRACTOR and the Inspector, the Inspector shall have the authority to reject material or to suspend the work until the question of issue can be referred to and decided upon by the ENGINEER.
- C. If the CONTRACTOR refuses to suspend operation on verbal order, the Inspector shall issue a written order giving the reason for shutting down the work.

After placing the order in the hands of the man in charge, the Inspector shall immediately leave the job. work done during the absence of the Inspector, after such written notice, will not be accepted nor paid for.

- D. Inspectors are not authorized to revoke, alter, enlarge, relax or release any requirements of these Contract Documents, nor to issue instructions contrary to them. Inspectors shall in no case act as foreman or perform other duties for the CONTRACTOR, nor interfere with management of the work by the latter. Any instructions which Inspectors may give the CONTRACTOR shall in no way be construed as releasing the CONTRACTOR from fulfillment of the terms of the Contract.
- E. The payment of any compensation, whatever may be its character or form, or the giving of any gratuity, or the granting of any valuable favor, by the CONTRACTOR to any Inspector, directly or indirectly, is strictly prohibited and any such act on the part of the CONTRACTOR will constitute a violation of this Contract and may subject the CONTRACTOR to other penalties provided for by law or ordinance.

#### 9.5 Inspections:

- A. The ENGINEER will make, or have made, such inspections and tests as he deems necessary to assure that the work is being accomplished in accordance with the requirements of the Contract. In the event such Inspections or tests reveal non-compliance with the requirements of the Contract, the CONTRACTOR shall bear the cost of such corrective measures as well as the cost of subsequent reinspection and retesting.
- B. Work done in the absence of a prescribed inspection may be required to be removed and replaced under proper inspection. The entire cost of removal and replacement, including the cost of all material which may be furnished by the CITY and used in the work thus removed, shall be borne by the CONTRACTOR, regardless of whether the work removed is found to be defective or not. Work covered up without the authority of the ENGINEER, shall, upon order of the ENGINEER, be uncovered to the extent required, and the CONTRACTOR shall similarly bear the entire cost of performing all the work and furnishing all the material necessary for the removal of the covering and its subsequent replacement.
- C. Unless otherwise provided, the cost of inspection and all inspection fees imposed by public agencies other than the fees associated with the issuance of the Master Building Permit by the City of Hollywood shall be paid by the CONTRACTOR.
- D. No inspection nor any failure to inspect at any time or place shall relieve the CONTRACTOR from any obligation to perform all of the work in strict conformance with the requirements of the Contract Documents.

## ARTICLE 10 - CHANGES IN THE WORK/CONTRACT PRICE

### 10.1 Changes in the Work or Terms of Contract Documents:

- A. Without invalidating the Contract and without notice to any surety CITY reserves and shall have the right, from time to time to make such increases, decreases or other changes in the character or quantity of the Work as may be considered necessary or desirable to complete fully and acceptably the proposed construction in a satisfactory manner. Any extra or additional work within the scope of this Project must be accomplished by means of appropriate Clarifications, Field Orders, or Change Orders.
- B. Any changes to the terms of the Contract Documents must be contained in a written document, executed by the parties hereto, with the same formality and of equal dignity prior to the initiation of any work reflecting such change.

This section shall not prohibit the issuance of Change Orders executed only by CITY as hereinafter provided.

### 10.2 Supplemental Instructions - Clarifications:

- A. The CITY, through the ENGINEER, shall have the right to approve and issue Clarifications setting forth written interpretations of the intent of the Contract Documents and ordering minor changes in Work execution, providing the Clarifications involve no change in the Contract Price or the Contract Time.
- B. The ENGINEER shall have the right to approve and issue Clarifications setting forth written orders, instructions, or interpretations concerning the Contract Documents or its performance, provided such Clarifications involve no change in the Contract Price or the Contract Time.

### 10.3 Field Orders / Change Orders:

- A. Changes in the quantity or character of the Work within the scope of the Project which are not properly the subject of Clarifications, including all changes resulting in changes in the Contract Price or the Contract Time, shall be authorized only by Field Orders or Change Orders approved in advance and issued in accordance with the provisions of the CITY Procurement Code, as amended from time to time.
- B. CONTRACTOR shall not start work on any changes requiring an increase in the Contract Price or the Contract Time until a Field Order or Change Order setting forth the adjustments is approved by the CITY. Upon receipt of a Change Order CONTRACTOR shall promptly proceed with the work set forth within the document.

- C. Field Orders shall be issued for change in Contract Price related to Cost Allowances specifically included on the Proposal Bid Form. Change Orders shall be issued when required for all other Contract Price Changes. Hereinafter, the term "Change Order(s)" shall be used to include "Change Orders" and "Field Orders" with the exception that Field Order shall not be used for any Contract Time adjustments.
- D. In the event satisfactory adjustment cannot be reached for any item requiring a change in the Contract Price or Contract Time, and a Change Order has not been issued, CITY reserves the right at its sole option to either terminate the Contract as it applies to the items in question and make such arrangements as may be deemed necessary to complete the disputed work; or the work shall be performed on the "cost of work" basis as described in Article 10.4.
- E. On approval of any Contract change increasing the Contract Price, CONTRACTOR shall ensure that the performance bond and payment bond are increased so that each reflects the total Contract Price as increased.
- F. Under circumstances determined necessary by CITY, Change Orders may be issued unilaterally by CITY.

10.4 Value of Change Order Work:

- A. The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
  - A.1 Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of items involved, subject to the provisions of Article 10.4.G.
  - A.2 By mutual acceptance of a lump sum which CONTRACTOR and CITY acknowledge contains a component for overhead and profit.
  - A.3 On the basis of the "cost of work," determined as provided in this Article, plus a CONTRACTOR's fee for overhead and profit which is determined as provided in Article 10.4.D.
- B. The term "cost of work" means the sum of all direct costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work described in the Change Order. Except as otherwise may be agreed to in writing by CITY, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Article 10.4.C.
  - B.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the work described in the Change Order under schedules of job classifications agreed upon by CITY and

CONTRACTOR. Payroll costs for employees not employed full time on the work covered by the Change Order shall be apportioned on the basis of their time spent on the work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay application thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing the work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by CITY.

- B.2 Cost of all materials and equipment furnished and incorporated in the work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless CITY deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to CITY. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to CITY and CONTRACTOR shall make provisions so that they may be obtained. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by CITY with the advice of ENGINEER and the costs of transportation, loading, unloading, installation, dismantling and removal thereof, all in accordance with the terms of said agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the work.
- B.3 Payments made by CONTRACTOR to Subcontractors for work performed by Subcontractors, If required by CITY, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to CITY who will then determine, with the advice of ENGINEER, which bids will be accepted. If the Subcontract provides that the Subcontractor is to be paid on the basis of cost of the work plus a fee, the Subcontractor's cost of the work shall be determined in the same manner as CONTRACTOR'S cost of the work. All Subcontractors shall be subject to the other provisions of the Contract Documents insofar as applicable.
- B.4 Cost of special engineers, including, but not limited to, engineers, architects, testing laboratories, and surveyors employed for services specifically related to the performance of the work described in the Change Order.

- B.5 Supplemental costs including the following:  
The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the work except for local travel to and from the site of the work.

Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the work, and cost less market value of such items used but not consumed which remains the property of CONTRACTOR.

Sales, use, or similar taxes related to the work, and for which CONTRACTOR is liable, imposed by any governmental authority. Deposits lost for causes other than CONTRACTOR's negligence; royalty payments and fees for permits and licenses. The cost of utilities, fuel, and sanitary facilities at the site. Receipted minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the work. Cost of premiums for additional bonds and insurance required because of changes in the work.

- C. The term "cost of the work" shall not include any of the following:

- C.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in its principal or a branch office for general administration of the work and not specifically included in the agreed-upon schedule of job classifications referred to in this Article, all of which are to be considered administrative costs covered by CONTRACTOR's fee.
- C.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.
- C.3 Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the work and charges against CONTRACTOR for delinquent payments.
- C.4 Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same, except for additional bonds and insurance required because of changes in the work.
- C.5 Costs due to the negligence or neglect of CONTRACTOR, any Subcontractors, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to,

the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.

- C.6 Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in this Section.
- D. CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:
  - D.1 A mutually acceptable fixed fee or if none can be agreed upon,
  - D.2 A fee based on the following percentages of the various portions of the cost of the work:

For costs incurred under Article 10.4.B.1, CONTRACTOR's fee shall not exceed ten percent (10%).

For costs incurred under Article 10.4.B.3 and B.4, CONTRACTOR's fee shall not exceed seven and one half percent (7.5%); and if a subcontract is on the basis of cost of the work plus a fee, the maximum allowable to the Subcontractor as a fee for overhead and profit shall not exceed ten percent (10%);

No fee shall be payable on the basis of costs itemized under Article 10.4.B.5 and Article 10.4.C.
- E. The amount of credit to be allowed by CONTRACTOR to CITY for any such change which results in a net decrease in cost, will be the amount of the actual net decrease. When both additions and credits are involved in anyone change, the combined overhead and profit shall be figured on the basis of the net increase, if any, however, CONTRACTOR shall not be entitled to claim lost profits for any Work not performed.
- F. Whenever the cost of any work is to be determined pursuant to Articles 10.4.B and 10.4.C, CONTRACTOR will submit in a form acceptable to CONSULTANT an itemized cost breakdown together with the supporting data.
- G. Where the quantity of any item of the Work that is covered by a unit price is increased or decreased by more than twenty percent (20%) from the quantity of such work indicated in the Contract Documents, an appropriate Change Order shall be issued to adjust the unit price, if warranted.
- H. Whenever a change in the Work is to be based on mutual acceptance of a lump sum, whether the amount is an addition, credit or no change-in-cost, CONTRACTOR shall submit an initial cost estimate acceptable to ENGINEER and CITY.
  - H.1 Breakdown shall list the quantities and unit prices for materials, labor, equipment and other items of cost.
  - H.2 Whenever a change involves CONTRACTOR and one or more Subcontractors and the change is an increase in the Contract Price,

overhead and profit percentage for CONTRACTOR and each Subcontractor shall be itemized separately.

- I. Each Change Order must state within the body of the Change Order whether it is based upon unit price, negotiated lump sum, or "cost of the work."

10.5 Notification and Claim for Change of Contract Price:

- A. Any claim for a change in the Contract Price shall be made by written notice by CONTRACTOR to the CITY and to ENGINEER within five (5) calendar days of the commencement of the event giving rise to the claim and stating the general nature and cause of the claim. Thereafter, within twenty (20) calendar days of the termination of the event giving rise to the claim, written notice of the extent of the claim with supporting information and documentation shall be provided unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim and such notice shall be accompanied by CONTRACTOR's written notarized statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. All claims for changes in the Contract Price shall be in accordance with Articles 10.3 and 10.4 hereof, if CITY and CONTRACTOR cannot otherwise agree. **IT IS EXPRESSLY AND SPECIFICALLY AGREED THAT ANY AND ALL CLAIMS FOR CHANGES TO THE CONTRACT PRICE SHALL BE WAIVED IF NOT SUBMITTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.**

10.6 Notice of Change:

If notice of any change affecting the general scope of the work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be CONTRACTOR's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. The CONTRACTOR shall furnish proof of such adjustment to the CITY. Failure of the CONTRACTOR to obtain such approval from the Surety may be a basis for termination of this Contract by the CITY.

10.7 Records:

The CONTRACTOR's representative and the ENGINEER shall compare records of extra work done at the end of the day. Such records shall be made in duplicate upon a form provided for such purpose by the ENGINEER and shall be signed by both the Inspector and the CONTRACTOR's representative, one copy being submitted to the ENGINEER and the other being retained by the CONTRACTOR.

10.8 Cancelled Items and Payments Therefore:

The CITY COMMISSION shall have the right to cancel those portions of the Contract relating to the construction of any item provided therein. Such cancellation shall entitle the CONTRACTOR to payment in a fair and equitable amount covering all items of cost incurred by him prior to the date of cancellation or suspension of the work. The CONTRACTOR shall be allowed a profit percentage on the materials used and on construction work actually performed, at the same rates as provided for "Extra Work", but no allowance will be made for anticipated profits. Acceptable materials ordered by the CONTRACTOR or delivered on the work, prior to date of such cancellation or suspension, may be purchased from the CONTRACTOR by the CITY at actual cost and shall thereupon, become property of the CITY, or may be returned to the manufacturer for a reasonable restocking charge.

10.9 Full Payment:

The Compensation herein provided shall be received and accepted by the CONTRACTOR as payment in full for all extra work done or costs incurred in event of cancellation.

## ARTICLE 11 - CHANGES IN THE CONTRACT TIME

### 11.1 Change Order:

The Contract Time may only be changed by a Change Order. A FULLY EXECUTED CHANGE ORDER MUST EXIST PRIOR TO EXTENSION OR SHORTENING OF THE CONTRACT TIME.

### 11.2 Notification and Claim for Change of Contract Time:

- A. Any claim for a change in the Contract Time shall be made by written notice by the CONTRACTOR to the CITY and to ENGINEER within five (5) calendar days of the commencement of the event giving rise to the claim and stating the general nature and cause of the claim. Thereafter within twenty (20) calendar days of the termination of the event giving rise to the claim, written notice of the extent of the claim with supporting information and documentation shall be provided unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim and such notice shall be accompanied by CONTRACTOR's written notarized statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. All claims for changes in the Contract Time shall be determined in accordance with Articles 10.3 and 10.4 hereof, if CITY and CONTRACTOR cannot otherwise agree. **IT IS EXPRESSLY AND SPECIFICALLY AGREED THAT ANY AND ALL CLAIMS FOR CHANGES TO THE CONTRACT TIME SHALL BE WAIVED IF NOT SUBMITTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.**
- B. The Contract Time will be extended an amount equal to time lost on critical Work items due to delays beyond the control of and through no fault or negligence of CONTRACTOR if a claim is made thereafter as provided in Article 11.2. Such delays shall include, but not be limited to, acts or neglect by any separate contractor employed by CITY, fire, floods, labor disputes, epidemics, abnormal weather conditions or acts of God

### 11.3 Basis for Extension:

Extensions of time shall be considered and will be based solely upon the effect of delays to the work as a whole. Extensions of time shall not be granted for delays to the work, unless the CONTRACTOR can clearly demonstrate, through schedule analysis, that the delay to the work as a whole arose in accordance with Article 12.3 or Article 15.1, and that such delays did or will, in fact, delay the progress of work as a whole. Time extensions shall not be allowed for delays to parts of the work that are not on the critical path of the project schedule. Time extensions shall not be granted until all float or contingency time, at the time of the delay, available to absorb specific delays and associated impacts is used.

11.4 Change of Time Due to Contract Execution Problems:

Refer to Article 3.4 for a decrease in Contract Time when the CONTRACTOR fails to return the correctly executed Contract Documents within the time allowed.

11.5 Change of Time Due to Change Order Evaluation:

When evaluating a proposed Change Order, the ENGINEER shall have access to any available float or contingency time. Extension will only be considered in accordance with Article 11.3.

11.6 Change of Time and Inspection and Testing:

Neither observations by the ENGINEER, nor inspections, tests or approvals by others, passing or failing, will be cause for consideration of time extension.

11.7 Change of Time and Defective Work:

- A. If WORK is found to be defective, CONTRACTOR shall bear all remedial expenses including any additional costs experienced by CITY due to delays to others performing additional WORK. CONTRACTOR shall further bear the responsibility for maintaining schedule, and will be excluded from a time extension and the recovery of delay damages due to the uncovering.
- B. If the WORK is found to be defective per the Specifications, but the CITY chooses to accept it at its sole discretion, CONTRACTOR shall bear the responsibility for maintaining schedule, and will be excluded from a time extension and the recovery of delay damages due to the uncovering.

11.8 Liquidated Damages:

All time limits stated in the Contract Documents are of the essence. The provisions of this Article 11 shall not exclude recovery for damages by CITY as indicated in Section 3 of the Supplementary General Conditions.

ARTICLE 12 - WARRANTY AND GUARANTEE;  
TEST AND INSPECTIONS;  
CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Warranty and Guarantee:

The CONTRACTOR warrants and guarantees to the CITY and the ENGINEER that all work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

12.2 Tests and Inspections:

- A. The CONTRACTOR shall give the ENGINEER and, when appropriate, the Building Department and other regulatory authorities which have jurisdiction over the work, timely notice of readiness of the work for all required inspections, tests or approvals.
- B. All inspections performed as a result of the issuance of the Master Building Permit shall be performed by the CITY. All costs associated with such inspections shall be paid by the CITY, EXCEPT THAT should said test or inspection fail to pass the CONTRACTOR shall pay all costs associated with the rework and the retesting.
- C. When any other regulatory authority, by virtue of its rules or regulations, requires specific tests or inspections, the CONTRACTOR shall assume full responsibility for and pay all costs in connection with said tests and inspections.
- D. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the ENGINEER's acceptance of a manufacturer, fabricator, supplier or distributor of materials or equipment proposed to be incorporated in the work, or of materials or equipment submitted for approval prior to ENGINEER's acceptance thereof for incorporation in the work and as otherwise specified in the Contract Documents.
- E. Neither observations by the ENGINEER nor inspections, tests or approvals by others shall relieve the CONTRACTOR from his obligations to perform the work in accordance with the Contract Documents.

12.3 Uncovering Work:

- A. If any work that is to be inspected, tested or approved is covered without written concurrence of the ENGINEER, it must, if requested, by the ENGINEER, be uncovered. Such uncovering and replacement shall be at the CONTRACTOR's expense.

- B. CONTRACTOR must contact all regulatory agencies issuing construction permits to make all necessary inspections. If CONTRACTOR fails to have the necessary inspections performed and such failure results in uncovering of work already performed, CONTRACTOR shall be responsible for all related time delays and monetary costs.
- C. If the ENGINEER considers it necessary or advisable that work previously covered with his permission or cognizance be observed, inspected or tested, the CONTRACTOR, at the ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the work in question, furnishing all necessary labor, material and equipment. If it is found that such work is defective, the CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services. If, however, such work is not found to be defective the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction if he makes a claim therefor in accordance with Article 10.2 and Article 11.2.

#### 12.4 City May Stop the Work:

If the work is defective, or the CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, the CITY may order the CONTRACTOR to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the CITY to stop the work shall not give rise to any duty on the part of the CITY to exercise this right for the benefit of the CONTRACTOR or any other party.

#### 12.5 Correction or Removal of Defective Work:

If required by the ENGINEER, the CONTRACTOR shall promptly, without cost to the CITY and as specified by the ENGINEER either correct any defective work, whether or not fabricated, installed or completed, or if the work has been rejected by the ENGINEER, remove it from the site and replace it with nondefective work.

#### 12.6 One Year Correction Period:

If within one year after the date of Substantial Completion or Final Completion as applicable, or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, the CONTRACTOR shall promptly without cost to the CITY and in accordance with the ENGINEER's written instructions, either correct such defective work, or if it has been rejected by the ENGINEER remove it from the site and replace it with nondefective work. If the CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the ENGINEER may have the defective work corrected or the rejected work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by the CONTRACTOR.

12.7 Acceptance of Defective Work:

If instead of requiring correction or removal and replacement of defective work, the ENGINEER prefers to accept it, he may do so. In such case, if acceptance occurs prior to the ENGINEER's recommendation of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; or if the acceptance occurs after such recommendation, an appropriate amount shall be paid by the CONTRACTOR to the CITY.

12.8 City May Correct Defective Work:

If the CONTRACTOR fails within a reasonable time after written notice of the ENGINEER to proceed to correct and to correct defective work or to remove and replace rejected work as required by the ENGINEER in accordance with Paragraph 12.5, or if the CONTRACTOR fails to perform the work in accordance with the Contract Documents, (including any requirements of the progress schedule), the CITY may, after seven days' written notice to the CONTRACTOR, correct and remedy any such deficiency. In exercising its rights under this Paragraph the CITY shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the CITY may exclude the CONTRACTOR from all or part of the site, take possession of all or part of the work, and suspend the CONTRACTOR's services related thereto, take possession of the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the work all materials and equipment stored at the site or for which the CITY has paid the CONTRACTOR but which are stored elsewhere. The CONTRACTOR shall allow the CITY, the CITY's representatives, agents and employees such access to the site as may be necessary to enable the CITY to exercise his rights under this Paragraph. All direct and indirect costs of the CITY in exercising such rights shall be charged against the CONTRACTOR in an amount verified by the ENGINEER, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitations, compensation for additional professional services required and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the CONTRACTOR's defective work. The CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the work attributable to the exercise by the CITY of the CITY's rights hereunder.

## ARTICLE 13 - PAYMENTS TO THE CONTRACTOR

### 13.1 Basis of Payment:

Progress payments shall be based on the aggregate of the unit price amounts listed in the Proposal or in the Schedule of Values which have been incorporated in the work acceptable to the ENGINEER.

### 13.2 Unit Price Inclusion:

The unit prices stated in the Proposal include all costs and expenses for materials, labor, tools, equipment, transportation, commissions, patent fees and royalties, removing crossings or other obstructions, protection or maintaining pipes, drains, railroad tracks, buildings, bridges, or other structures furnishing temporary crossings or bridges, furnishing all supplemental construction stakes, batter boards, templates, common and ordinary labor for handling materials during inspection replacing any property damage, together with any and all costs or expenses for performing and completing the work as specified.

### 13.3 Schedule of Values: (Lump Sum Price Breakdown)

A Schedule of Values must be submitted within seven days subsequent to the CONTRACTOR executing and submitting the Documents required of Article 2.13 of the Section II – Special Terms and Conditions. The schedules shall be satisfactory in form and substance to the ENGINEER, and shall include quantity and unit prices aggregating the Contract Price, and shall subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction. Upon acceptance of the schedule of values by the ENGINEER, it shall be incorporated into a form of Application for Payment acceptable to the ENGINEER.

### 13.4 Changed Conditions: (Unit Price Only)

It is mutually agreed that due to latent field conditions which can not be foreseen at the time of advertising for bids, adjustments of the Plans to field conditions will be necessary during construction; and, therefore, such changes in the plans shall be recognized as constituting a normal and accepted margin of adjustment not unusual and not involving or permitting any change or modification of unit prices, in which case payment will be made for the revised quantities at the unit price bid in the Proposal.

### 13.5 Application for Progress Payment:

On the 20th day of the month or the first working day thereafter, the CONTRACTOR shall submit to the ENGINEER for review an Application for Payment form filled out and signed by the CONTRACTOR. The form shall be notarized, and shall cover the work completed as of the date of the application. The Application for Payment shall be accompanied by a Schedule of Values, and any other supporting documentation as the ENGINEER may reasonably require.

13.6 Payment for Materials:

If payment is requested on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to the ENGINEER, as will establish the CITY's title to the material and equipment and protect the CITY's interest therein, including applicable insurance.

13.7 Affidavit Required:

All Applications for Payment shall include an Affidavit of the CONTRACTOR stating that all previous progress payments received on account of the work have been applied to discharge in full all of CONTRACTOR's obligations reflected in prior Applications for Payment. The amount of retainage with respect to progress payments will be 5%.

13.8 Retainage:

The amount of retainage with respect to progress payments will be 5% until completion of the construction services purchased pursuant to the Contract.

13.9 CONTRACTOR's Warranty of Title:

The CONTRACTOR warrants and guarantees that title to all work, materials and equipment covered by any Application for Payment whether incorporated in the Project or not, will pass to the CITY at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereinafter in these General Conditions referred to as "Liens").

13.10 Review of Application for Payment:

The ENGINEER will, within seven (7) days, review the Application for Payment and either approve and submit it for payment or notify the CONTRACTOR of the deficiencies such that the CONTRACTOR may make the necessary corrections and resubmit in time for the month's payment. However, the ENGINEER may refuse to recommend the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations. He may also refuse to recommend any such payment, or because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended to such extent as may be necessary in the ENGINEER's opinion to protect the CITY from loss because:

- A. The work is defective, or completed work has been damaged requiring correction or replacement.
- B. Written claims have been made against the CITY or Liens have been filed in connection with the work.
- C. The Contract Price has been reduced because of Change Order.
- D. The CITY has been required to correct defective work or complete the work in accordance with Article 12.8.
- E. The CONTRACTOR's unsatisfactory prosecution of the work in accordance with the Contract Documents.
- F. The CONTRACTOR's failure to make payment to Sub- Contractors, or for labor, materials or equipment.

13.11 Payment to the Contractor:

Payments are made only on the fifteenth day or first workday thereafter of each month.

ARTICLE 14 - SUBSTANTIAL COMPLETION, PARTIAL UTILIZATION,  
FINAL CLEAN UP, INSPECTION, PAYMENT AND ACCEPTANCE

14.1 Substantial Completion:

When the CONTRACTOR considers the entire work ready for its intended use, the CONTRACTOR shall, in writing to the ENGINEER, certify that the entire work is substantially complete and request that the ENGINEER issue a Certificate of Substantial Completion. Within a reasonable time thereafter the CONTRACTOR and the ENGINEER shall make an inspection of the work to determine the status of completion. If the ENGINEER does not consider the work substantially complete, the ENGINEER will notify the CONTRACTOR in writing giving his reasons therefor. If the ENGINEER considers the work substantially complete, the ENGINEER will prepare and deliver to the CONTRACTOR a Certificate of Substantial Completion, which shall fix the date of Substantial Completion. There shall be attached to the certificate a proposed Punch List, developed by the CONTRACTOR, of items to be completed or corrected before final payment.

Within ten (10) days after delivery of the certificate, the CITY shall review the proposed Punch List and either approve it or contact the CONTRACTOR to commence good faith efforts to develop a Punch List that is satisfactory to both parties. If the parties are unable to resolve any differences they may have in the development of the Punch List, the ENGINEER shall resolve their differences. The parties shall expedite the process of developing the Punch List with the intent of finalizing the Punch List within sixty (60) days after the date of Substantial Completion.

At the time of delivery of the Certificate of Substantial Completion the ENGINEER will deliver to the CONTRACTOR written notice as to division of responsibilities pending final payment between the CITY and the CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities and insurance, said responsibilities will be binding on the CITY and the CONTRACTOR until final payment. Unless otherwise stated herein or on the Certificate of Substantial Completion, all building, product, equipment, and machinery warranties will commence on the date of Substantial Completion. The CITY shall have the right to exclude the CONTRACTOR from the work after the date of Substantial Completion, but the CITY shall allow the CONTRACTOR reasonable access to complete or correct items on the Punch List.

14.2 Partial Utilization:

Use by the CITY of any finished part of the work which has specifically been identified in the Contract Documents or which the ENGINEER and the CONTRACTOR agree constitutes a separately functioning and usable part of the work that can be used by the CITY without significant interference with CONTRACTOR's performance of the remainder of the work, may be accomplished prior to Substantial Completion of all the work subject to the following:

- A. The ENGINEER at any time may request the CONTRACTOR in writing to permit the CITY to use any such part of the work which the ENGINEER believes to be ready for its intended use and substantially complete. If the CONTRACTOR agrees, the CONTRACTOR will certify to the ENGINEER that said part of the work is substantially complete and request the ENGINEER to issue a Certificate of Substantial Completion for that part of the work. The CONTRACTOR, at any time, may notify the ENGINEER in writing that the CONTRACTOR considers any such part of the work ready for its intended use and substantially complete and request the ENGINEER to issue a Certificate of Substantial Complete for the part of the work. Within a reasonable time after either such request, the CONTRACTOR and the ENGINEER shall make an inspection of that part of the work to determine its status of completion. If the ENGINEER does not consider that part of the work to be substantially complete, the ENGINEER will notify the CONTRACTOR in writing giving the reasons therefore. If the ENGINEER considers that part of the work to be substantially complete, the provisions of Article 14.1 will apply with respect to Certificate of Substantial Completion of that part of the work and the division of responsibility in respect thereof and access thereto. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the WORK shall be borne by the CONTRACTOR. Upon issuance of said written notice of partial utilization, the OWNER will accept responsibility for the protection and maintenance of all such items or portions of the WORK described in the written notice.

#### 14.3 Final Clean-Up:

Upon completion of the work and before final inspection shall be made, the CONTRACTOR shall clean and remove from the site, the Right-of-Way and adjacent property, all surplus and discarded materials, rubbish, and temporary structures; restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work; and shall leave the site and vicinity unobstructed in a neat and presentable condition throughout the entire area or length of the work under Contract. The placing of materials of every character, rubbish, or equipment on the abutting property, with or without the consent of the property owners, shall not constitute the satisfactory disposal. If the work is of such a character as may be done by block or sections, the CONTRACTOR may be required to promptly remove and dispose of accumulated rubbish, debris or surplus materials from blocks or sections as completed or partially completed. No separate payment will be made for final cleaning up and restoration of property, but all costs thereof shall be included in the prices bid for the various scheduled items of work.

#### 14.4 Final Inspection:

Upon written notice from the CONTRACTOR that the entire work or an agreed portion thereof is complete and final clean-up has been completed, the ENGINEER will make a final inspection with the CONTRACTOR and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the work is incomplete or defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

#### 14.5 Final Application for Payment:

After the CONTRACTOR has completed all such corrections to the satisfaction of the ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in Article 7.19 of the General Conditions and other documents; all as required by the Contract Documents and after the ENGINEER has indicated that the work is acceptable (subject to the provisions of Article 14.9) the CONTRACTOR may make Application for Final Payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the CITY) of all Liens arising out of or filed in connection with the work. In lieu thereof and as approved by the CITY, the CONTRACTOR may furnish receipts or releases in full; an affidavit of the CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the work for which the CITY or the CITY's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, the CONTRACTOR may furnish a Bond or other collateral satisfactory to the CITY to indemnify the CITY against any Lien.

#### 14.6 Final Payment and Acceptance:

If on the basis of the ENGINEER's observation of the work during construction and final inspection, and the ENGINEER's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the ENGINEER is satisfied that the work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will recommend payment. Thereupon the ENGINEER will give written notice to the CITY and the CONTRACTOR that the work is acceptable subject to the provisions of Article 14.9.

#### 14.7 Payment of Retainage Without Final Completion:

If through no fault of the CONTRACTOR, final completion of the work is significantly delayed and if the ENGINEER so confirms, the CITY shall, upon receipt of the CONTRACTOR's final Application for Payment and recommendation of the ENGINEER, and without terminating the Agreement, make payment of the balance due for the portion of the work fully completed and accepted. If the remaining balance to be held by the CITY for work not fully completed or corrected is less than the retainage stipulated in the Agreement and if Bonds have been furnished as required in Article 5.2, the written consent of the Surety to the payment of the balance due for that portion of the work fully completed and accepted shall be submitted by the CONTRACTOR to the ENGINEER with the application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

14.8 CONTRACTOR's Continuing Obligation:

The CONTRACTOR's obligation to perform and complete the work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the ENGINEER, nor the issuance of a Certificate of Substantial Completion, nor any payment by the CITY to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the work or any part thereof by the CITY nor any act of acceptance by the CITY nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by the ENGINEER pursuant to Article 14.6, nor any correction of defective work by the CITY will constitute an acceptance of work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the work in accordance with the Contract Documents (except as provided in Article 14.9).

14.9 Waiver of Claims:

The making and acceptance of final payment will constitute:

- A. A waiver of all claims by the CITY against the CONTRACTOR, except claims arising from unsettled Liens, from defective work appearing after final inspection pursuant to Article 14.4 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by the CITY of any rights in respect of the CONTRACTOR's continuing obligations under the Contract Documents.
- B. A waiver of all claims by the CONTRACTOR against the CITY other than those previously made in writing and still unsettled.

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

### 15.1 City May Suspend Work:

The CITY may, at any time and without cause, suspend the work or any portion thereof for a period of not more than ninety (90) days by notice in writing to the CONTRACTOR which will fix the date on which work will be resumed. The CONTRACTOR shall resume the work on the date so fixed. The CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.

### 15.2 City May Terminate:

- A. Upon the occurrence of any one or more of the following events:
1. If the CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if the CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency.
  2. If a petition is filed against the CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against the CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency.
  3. If the CONTRACTOR makes a general assignment for the benefit of creditors.
  4. If a trustee, receiver, custodian or agent of the CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of the CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of the CONTRACTOR's creditors.
  5. If the CONTRACTOR admits in writing an inability to pay its debts generally as they become due.
  6. If the CONTRACTOR persistently fails to perform the work in accordance with the Contract Documents (including, but not limited to, failure to supply a qualified superintendent or sufficient skilled workers or suitable materials or equipment or failure to adhere to the approved progress schedule revised from time to time).
  7. If the CONTRACTOR disregards laws or regulations of any public body having jurisdiction.

8. If the CONTRACTOR disregards the authority of the ENGINEER.
  9. If the CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents.
- B. The CITY may, after giving the CONTRACTOR and the Surety seven days' written notice and to the extent permitted by laws and regulations, terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the work all materials and equipment stored at the site or for which the CITY has paid the CONTRACTOR but which are stored elsewhere, and finish the work as the CITY may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs) such excess will be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR, or CONTRACTOR's Surety, shall pay the difference to the CITY.
  - C. Where the CONTRACTOR's services have been so terminated by the CITY, the CITY alone shall determine the scope and description of the work to be completed and the method and schedule for completing it.
  - D. Where the CONTRACTOR's services have been so terminated by the CITY the termination will not affect any rights or remedies of the CITY against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due the CONTRACTOR by the CITY will not release the CONTRACTOR from liability.
  - E. Upon seven days' written notice to the CONTRACTOR the CITY may, without cause and without prejudice to any other right or remedy, elect to abandon the work and terminate the Contract. In such case the CONTRACTOR shall be paid for all work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

15.3 Contractor May Stop Work or Terminate:

If through no act or fault of the CONTRACTOR, the work is suspended for a period of more than ninety (90) days by the CITY or under an order of court or other public authority, or the CITY fails for sixty (60) days to pay the CONTRACTOR any sum finally determined to be due, then the CONTRACTOR may, upon seven days' written notice to the CITY terminate the Contract and recover from the CITY payment for all work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Contract, if the CITY has failed to make any payment as aforesaid, the CONTRACTOR may upon seven days' written notice to the CITY stop the work until payment of all amounts then due are paid. The provisions of this paragraph shall not relieve the CONTRACTOR of the obligations to carry on the work in accordance with the progress schedule and without delay during disputes and disagreements with the CITY.

- END OF SECTION -

ATTACHMENT C  
SUPPLEMENTARY GENERAL CONDITIONS  
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**General Note:**

The General Conditions refer to specific section numbers in the Supplementary General Conditions. These reference numbers may not coordinate with the actual Article numbers utilized in the Supplementary General Conditions. The CONTRACTOR shall comply with all General Conditions and all Supplementary General Conditions as well as related conditions included in the General Requirements, Division 1 of the Technical Specifications. Incorrect cross-reference numbers shall not relieve this requirement.

**1. Project Schedule**

Time is of the essence for this work. The following defines the schedule for the project:

**CONSTRUCTION WORK SCHEDULE  
CONSTRUCTION / STARTUP / ACCEPTANCE:**

Major Milestones	Completion Time (Calendar Days)	Liquidated Damages (Per Day)
Substantial Completion	<b>150</b>	<b>\$1,000.00</b>
Project Closeout	<b>30</b>	<b>\$1,000.00</b>

Failure to meet any of the above defined construction/startup/acceptance completion dates shall subject the CONTRACTOR to pay damages as specified in these Supplementary General Conditions in Article 3.

<sup>(1)</sup>Substantial Completion

1. Refer to Attachment B - General Conditions Articles 14.1 and 14.2. (Certification of Substantial Completion Services appended to the Supplementary General Conditions).
2. Substantial Completion shall also include:
  - Completion of all construction work associated with the specific "Major Milestone" listed in the construction work schedule including completion of punch list items. "Completion of punch list items" shall be as determined by the Engineer in the field.
  - Coating touchup completed.
  - Record shop drawings and O&M submittals received and accepted by the Engineer.
  - Record drawing red-lines received and accepted by the Engineer.
  - Guarantee certifications, performance affidavits, and all other certifications received and accepted by the Engineer.

Contractor shall also conform to construction sequence constraints as defined on the Drawings and in Specifications.

<sup>(2)</sup>Project Closeout

1. Refer to Division 1 General Requirement, Section 01700 Project Closeout.
2. Project Closeout shall also include:
  - All requirements of substantial completion met plus the following.
  - Site cleanup and restoration completed.
  - All other sitework completed.
  - Minor punch list items completed (minor as defined by the Engineer in the field)
  - Demobilization completed.
  - Releases from all parties who are entitled to claims.

The title "Engineer" utilized in these descriptions for substantial and final completion shall mean the City staff engineer assigned to this project, or his designated representative.

2. **Insurance Requirements (Not Used. Refer to ARTICLE 2.25 of SECTION II – SPECIAL TERMS AND CONDITIONS OF THE CONTRACT DOCUMENTS**

**3. Liquidated Damages**

Liquidated damages shall be paid by the CONTRACTOR to the CITY for failure to complete work on time in accordance with the following schedule:

CONSTRUCTION/STARTUP/ACCEPTANCE:		
<u>Major Milestones</u>	<u>Completion Time (calendar days)</u>	<u>Liquidated Damages (Per Day)</u>
1. Substantial Completion	<b>150</b>	<b>\$1,000.00</b>
2. Project Closeout	<b>30</b>	<b>\$1,000.00</b>

The CITY is hereby authorized to deduct the sums described above from the monies which may be due to the CONTRACTOR for the work under this contract. Liquidated damages shall be additive such that the maximum total which may be deducted shall be \$1,000.00/day. Other damages for failure to meet warranty conditions as defined in other sections of the Specifications shall also be added with liquidated damages for failure to meet completion times.

4. **Restricted Area**

The CONTRACTOR shall, in installing the new facilities, confine all activities within the CITY property, easement, and right-of-ways indicated.

5. **Existing Facilities and Structures**

All existing facilities shall be protected, and if damaged, shall be repaired by the CONTRACTOR at no additional cost to the CITY.

6. **Explosives**

Explosives shall not be used on this project.

7. **Contract Documents**

The CITY will provide the CONTRACTOR with one (1) set of Contract Documents after the Notice to Proceed.

8. **Required Notifications**

When provisions of the pertinent codes, standards or regulations conflict with this Specification, the more stringent shall apply.

Prior to any site work, the CONTRACTOR shall notify the Engineering and Construction Services Division Inspector at (954) 921-3930.

Prior to excavation at the site, the CONTRACTOR shall notify the appropriate utilities and Sunshine State One-Call of Florida, Inc. (formerly U.N.C.L.E.) at 1-800-432-4770 for locations of buried utilities.

Prior to closure of any CITY streets or alleyways, or other activity which requires the diversion of traffic, the CONTRACTOR shall notify and obtain the permission of the CITY of Hollywood Fire and Police Communications Section at (954) 967-4321.

9. **Notice of Completion**

See attached form.

10. **Prevailing Wage Requirement**

A. The CONTRACTOR shall be responsible for ensuring payment of the rate of wages and fringe benefits, or cash equivalent, for all laborers, mechanics and apprentices employed by him/her or his/her SUBCONTRACTORS on the work covered by this contract which shall be not less than the prevailing rate of wages and fringe benefits payment or cash equivalent for similar skills or classifications of work as established by the General Wage Decision by the United States Department of Labor for Broward County, Florida that is in effect prior to the date the CITY issued the invitation for bids for this project (the prevailing rate of wages and fringes can be obtained at website <http://www.access.gpo.gov/davisbacon>).

If the General Wage Decision fails to provide for a fringe benefit rate for any worker classification, then the fringe benefit rate applicable to such worker classification shall be the fringe benefit rate that has a basic wage rate closest in dollar amount to the work classification for which no fringe benefit rate has been provided.

- B. Upon commencement of work, the CONTRACTOR and all of his/her SUB-CONTRACTORS shall post a notice in a prominent place at the work site stating the requirements of this Article.
- C. As per the City of Hollywood Code of Ordinances, Prevailing Wage Requirements and Fringe Benefits are applicable to the following: (A) Utilities projects over \$1,000,000.00 (one million dollars) and (B) All other projects over \$500,000.00 (five hundred thousand dollars).

## **11. Inspections and Testing During Overtime**

- A. The following supplement Article 3.15 and 3.16 of the General Conditions:

For weekend work, CONTRACTOR shall submit a written request to the CITY by the preceding Wednesday. A separate request is required for each week that the CONTRACTOR wished to work on a weekend. For evening and holiday work, CONTRACTOR shall submit a written request to the CITY three (3) days in advance. The CITY will provide inspection services for all overtime work and the CONTRACTOR shall pay for inspection services per Article 3.15, no exceptions.

Similarly, Holiday and other overtime work shall be requested a minimum of 36-hours in advance and CITY will provide inspection for all overtime.

- B. Exceptions to the hours and days of the week for work and other related limitations are allowed only for tie-ins during low flow periods / early morning hours, coatings that need to be applied during lower temperature times of the day and whenever the Documents specifically define that work shall be completed outside of the limitations for "normal" work hours, days, etc.

Inspection for tie-ins during low flow/early morning and specialty coating application performed during nighttime will not be cause for extra inspection costs unless such work is remedial in nature as a result of defective work.

## **12. Retainage**

After 50-percent completion of the construction services purchased pursuant to this contract, CONTRACTOR may present to CITY a payment request for one-half of the retainage then held by CITY. CITY shall promptly make payment to CONTRACTOR, unless CITY has grounds for withholding the payment of retainage. CITY shall have grounds for withholding the payment of retainage with respect to any amounts that are the subject of a good-faith dispute, the subject of a claim brought pursuant to Florida Statute Section 255.05, or otherwise the subject of a claim or demand by CITY or CONTRACTOR.

At acceptance of Substantial Completion, CITY shall promptly make payment to CONTRACTOR of one-half of the retainage then held by CITY. At acceptance of completion of all punch list items, CITY shall promptly make payment to CONTRACTOR the balance of retainage then held by CITY.

**13. Owner's Contingency (NOT USED)**

*This allowance is in its entirety dedicated for the use of the Owner (The City of Hollywood) to address conditions (or work) associated with undefined conditions. All work resulting from undefined conditions shall be authorized in writing and in advance by the Owner, specifically the Director of Public Services, through the full execution of a Field Order. The actual amount to be paid per Field Order will be negotiated and agreed by both parties (the Owner and the Contractor). The final/negotiated amount of the field order will be deducted from the Owner's Allowance designated in the Bid Proposal and Schedule of Values. The Owner reserves the right to award none, any portion of, or all of the money associated with this allowance. By executing the CONTRACT between the City of Hollywood and the Contractor, the Contractor acknowledges that under no circumstances he or she should assume that he or she would be entitled to any amounts set aside by the City of Hollywood within the Owner's Allowance.*

# CERTIFICATE OF SUBSTANTIAL COMPLETION

**PROJECT:**

**ENGINEER:**

**TO:**

**CONTRACTOR:**

**CONTRACT FOR:**

**NOTICE TO PROCEED DATE:**

**DATE OF ISSUANCE:**

**PROJECT OR DESIGNATED PORTION SHALL INCLUDE:**

Portions of the work performed under this Contract as described above, have been reviewed and found to be substantially complete. The Date of Substantial Completion of Project or designated portion thereof designated above is hereby established as \_\_\_\_\_ which is also the date of commencement of applicable warranties required by the Contract Documents for the noted area.

## **DEFINITION OF DATE OF SUBSTANTIAL COMPLETION**

The Date of Substantial Completion of the work or designated portion thereof is the date certified by the ENGINEER ("Date of Issuance" above) when construction is sufficiently complete, in accordance with the Contract Documents, so the CITY can occupy or utilize the work or designated portion thereof for the use for which it is intended, as expressed in the Contract Documents.

A list of items to be completed or corrected, prepared by the CONTRACTOR and verified and amended by the ENGINEER, for the above referenced "Project or Designated Portion" is attached to this form (attached "Punch List" dated \_\_\_\_\_).

The failure to include any items on such list does not alter the responsibility of the CONTRACTOR to complete all work in accordance with the Contract Documents.

# CERTIFICATE OF SUBSTANTIAL COMPLETION

Please note that in accordance with Article 14 General Conditions, Public Utilities the Contractor retains full responsibility for the satisfactory completion of all work regardless of whether the Owner occupies and / or operates a part of the facility and that the taking possession and use of such work shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents.

---

**ENGINEER**

**BY**

**DATE**

---

**CONTRACTOR**

**BY**

**DATE**

The CITY OF HOLLYWOOD, through the City's authorized representative, accepts the work or designated portion thereof as substantially complete and will assume full possession thereof at \_\_\_\_\_(time) on \_\_\_\_\_  
\_\_\_\_\_ (date).

---

**BY**

**DATE**

- END OF SECTION -



**CITY OF HOLLYWOOD  
FLORIDA**

**SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT**

**CONTRACT DOCUMENTS**

**INJECTION WELL NO. 2 REPAIR**

**CITY PROJECT NO. 23-9737**

**BID SET**

**ATTACHMENT D**

**SEPTEMBER 2023**

**Hazen**

**Hazen and Sawyer  
4000 Hollywood Boulevard, Suite 750N  
Hollywood, FL 33021  
Certificate of Authorization Number: 2771**

***Engineers Project No. 4321-099***

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**DIVISION 1**  
**GENERAL REQUIREMENTS**

## SECTION 01010 – SUMMARY OF WORK

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The Work to be performed under this Contract shall consist of furnishing and installation of all tools, equipment, materials, supplies, manufactured articles, transportation and services, including fuel, power, water, and essential communications, for the performance of all labor, work, and/or other operations as required for the fulfillment of the Contract in strict conformance with the Contract Documents. The Work shall be complete, and all work, materials, and services not expressly shown or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the CONTRACTOR as though originally so specified or shown, at no increase in cost to the CITY.
- B. Wherever the Contract Documents address a third party, i.e., subcontractor, manufacturer, etc., it is to be considered as the CONTRACTOR through the third party.
- C. Wherever a reference to number of days is noted, it shall be construed to mean calendar days.

#### 1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work shall be performed at the Southern Regional Wastewater Treatment Plant (SRWWTP), 1621 North 14th Avenue, Hollywood, Florida 33020
- B. This project includes the furnishing of all labor, materials, equipment, services and incidentals for repair of the deep Injection Well No. 2 (IW-2). This work includes, but is not limited to, modifications to the upper portion of the 24-inch diameter injection well casing, cutting and removing portions of the other well casings, modification to the concrete slab at the injection well, concrete pipe supports, relocation and reinstallation of existing field instrumentation, reconnecting the existing WWTP programmable logic controller (PLC), reinstallation of field instruments, and a partial mechanical integrity test (MIT). The work also includes injection well concrete pad repairs, housekeeping pads and all associated general, civil, mechanical, structural, piping, painting, electrical, instrumentation and appurtenant work, complete, tested and ready for operation, all in conformance with the Contract Documents.
- C. All work shall be in compliance with all applicable Federal, State and Local laws and regulations, including those for materials that contain lead. All work shall meet OSHA compliance.

#### 1.03 WORK BY OTHERS

- A. The CONTRACTOR's attention is directed to the fact that Work is being conducted at the site by other Contractors during the performance of the Work under this Contract. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the Work of such other Contractors, and shall cooperate fully with such Contractors

to provide continued safe access to their respective portions of the site, as required to perform their respective contracts.

#### 1.04 ABANDONMENT AND SALVAGE OF EXISTING FACILITIES

- A. The scope of work requires the CONTRACTOR to interface with existing structures, mechanical equipment, electrical facilities and piping which will be abandoned or otherwise removed as part of the Work. Prior to beginning any work associated with existing facilities to be abandoned, salvaged, or otherwise removed, the CONTRACTOR shall inform the ENGINEER of its intent so that all arrangements can be made with the CITY for disconnecting electrical and instrumentation service (where appropriate), isolating pipelines (where possible) or otherwise removing existing facilities from service to the extent possible. The CONTRACTOR shall not proceed without written authorization from the ENGINEER.
- B. Piping indicated on the Drawings as being removed, or any piping to be abandoned which interferes with new structures or piping, shall be excavated and removed using methods which will not disturb adjacent piping or other facilities. All pipe materials shall be subject to salvage by the CITY as defined below. Any remaining piping on both ends of pipe segments removed shall be abandoned in-place, per the above definition. After piping has been removed, the CONTRACTOR shall backfill the evacuated area in accordance with requirements set forth in other sections of these specifications.

#### 1.05 CONTRACTOR'S USE OF PROJECT SITE

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices, as noted in the Contract Drawings.
- B. Disposal of Debris: All debris, materials, piping, and miscellaneous waste products from the Work described in this section shall be removed from the project as soon as possible. They shall be disposed of in accordance with applicable Federal, State, and Local regulations. The CONTRACTOR is responsible for determining these regulations and shall bear all costs or retain any profit associated with disposal of these items.

#### 1.05 CITY'S USE OF PROJECT SITE

- A. The CITY may utilize all or part of the facilities during the entire period of construction for the conduct of the CITY's normal operations. The CONTRACTOR shall cooperate with the CITY to minimize interference with the CONTRACTOR's operations and to facilitate the CITY's operations.

#### 1.06 PROJECT MEETINGS

- A. Preconstruction Conference: Prior to the commencement of Work at the site, a preconstruction conference will be held at a mutually agreed time and place which shall be attended by the CONTRACTOR, its superintendent, and its subcontractors as appropriate. Other attendees will be:
  - 1. Representatives of the CITY.

2. Governmental representatives as appropriate.
  3. Others as requested by CONTRACTOR, CITY, or ENGINEER.
- B. Unless previously submitted to the ENGINEER, the CONTRACTOR shall bring to the conference one copy each of the following:
1. Preliminary schedule.
  2. Preliminary procurement schedule of major equipment and materials and items requiring long lead time.
  3. Preliminary Shop Drawing/Sample/Substitute or "Or Equal" submittal schedule.
  4. Schedule of Payment Items (lump sum price breakdown) for progress payment purposes.
- C. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:
1. CONTRACTOR's tentative schedules.
  2. Transmittal, review, and distribution of CONTRACTOR's submittals.
  3. Processing applications for payment.
  4. Maintaining record documents.
  5. Critical work sequencing.
  6. Field decisions and Change Orders.
  7. Use of project site, office and storage areas, security, housekeeping and the CITY's needs.
  8. Major equipment deliveries and priorities.
- D. The ENGINEER will preside at the preconstruction conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.
- E. Progress Meetings: The ENGINEER will schedule and hold regular on-site progress meetings at least bi-weekly and at other times as requested by ENGINEER. The CITY, CONTRACTOR, ENGINEER, and all subcontractors active on the site shall be represented at each meeting. CONTRACTOR may at its discretion request attendance by representatives of its suppliers, manufacturers, and other subcontractors.
- F. The ENGINEER will preside at the meetings and provide for keeping and distribution of the minutes. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

- G. The CONTRACTOR shall attend meetings held to coordinate work between other contracts that may be on-going on the project site. The General Superintendent, Job Superintendent, and/or other key representatives of each prime CONTRACTOR shall attend these meetings, at the CITY's request.

#### 1.07 PERMITS

- A. Except for permits obtained by the CITY, it shall be the CONTRACTOR's responsibility to secure all permits of every description required to initiate and complete the work under this contract.
- B. The CITY is currently in the process of securing permit approval from FDEP for the IW-2 repair to be performed under this CONTRACT.

#### 1.08 FIELD ENGINEERING

- A. The CONTRACTOR shall employ a Land Surveyor registered in the State of Florida and acceptable to the ENGINEER. The CONTRACTOR shall locate and protect survey control and reference points. Elevations shall be provided for top of all exposed casings, wellhead elevations, top of the concrete injection well pad (at center and corners), and other appropriate locations.
- B. Provide Field Engineering Services: Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- C. Submit a copy of registered site drawing and certificate signed by the Land Surveyor that the elevations and locations of the Work are in conformance with the Contract Documents including elevation of the top of the casings and top of the grout around the casings.

#### 1.09 SITE CONDITIONS

- A. The CONTRACTOR acknowledges that it has investigated prior to bidding and satisfied itself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides, water tables or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during execution of the Work. The CONTRACTOR further acknowledges that it has satisfied itself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, or any contiguous site, as well as from information presented by the Drawings and Specifications made a part of this Contract, or any other information made available to it prior to receipt of Bids. Any failure by the CONTRACTOR to acquaint itself with the available information will not relieve the CONTRACTOR from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The CITY assumes no responsibility for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available by the CITY.

1.10 DIMENSIONS OF EXISTING FACILITIES

- A. Where the dimensions and locations of existing improvements are of critical importance in the installation or connection of new work, the CONTRACTOR shall verify such dimensions and locations in the field prior to the fabrication and/or installation of materials or equipment which are dependent on the correctness of such information.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01025 – MEASUREMENT AND PAYMENT

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Payments to the CONTRACTOR shall be made on the basis of the Proposal bid items as full and complete payment for furnishing all materials, labor, tools and equipment, and for performing all operations necessary to complete the work included in the Contract Documents. Such compensation shall also include payments for any loss or damages arising directly or indirectly from the work, or from any discrepancies between the actual quantities of work and those shown in the Contract Documents, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the CITY.
- 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 plans and specified herein. The Basis of Payment for an item at the price shown in the Proposal shall be in accordance with its description of the item in this Section and as related to the work specified and as shown on the Drawings. Unit prices where used will be applied to the actual quantities furnished and installed in conformance with the Contract Documents.
- C. The CONTRACTOR's attention is called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the CONTRACTOR feel that the cost of any item of work has not been established by the Proposal or Basis of Payment, he shall include the cost for that work in the last 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 this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the CITY, in accordance with the Schedule of Payment Values as described in Section 01300, unless otherwise specified. A representative of the CONTRACTOR shall witness all field measurements

#### 1.03 PAYMENT ITEMS

- A. Item No. 1 – Mobilization: The lump sum price bid for this item shall be full compensation for all mobilization activities, including but not limited to bonds, insurance, scheduling, temporary facilities, audio-video documentation of the existing site, preparation and submittal of shop drawings, and all other activities necessary to prepare to complete the contract work. The payment item for mobilization shall not exceed 3% of the sum of Bid Item Nos. 2 through 6.
- B. Item No. 2 – Repair of IW-2: Payment for all labor, equipment; and material for all work necessary and required to repair Injection Well No. 2 (IW-2) as required in the Contract

Documents. This item includes but is not limited to surveying, removing and storing wellhead piping; welding, demolition, excavation, dewatering as needed, implementing security requirements; installing temporary construction power, wiring and lighting facilities, all on-site communication facilities, on-site sanitary facilities, temporary water facilities, chemicals, disposal of fluids, all required bonds and insurance, having all OSHA required notices and establishment of safety programs, and submitting initial submittals, pressure tests, and for all other work required for complete testing of the injection well for the Work to be completed in accordance with the Contract Documents. Item No. 2 includes all work not defined in other Bid Items.

- C. Item No. 3 – Mechanical Integrity Testing: Payment for all labor, equipment; and material for all work necessary and required for mechanical integrity testing of Injection Well No. 2 (IW-2) as required in the Contract Documents. This item includes but is not limited to video surveys, casing brushing, XY caliper logging, pressure tests, and for all other work required for complete testing of the injection wells for the Work to be completed in accordance with the Contract Documents.
- D. Item No. 4 – Additional Video Survey: Payment for all labor, equipment, and material required for IW-2 casing video logging including, coordination, and appurtenant work required for a complete survey in accordance with the Contract Documents.
- E. Item No. 5 – Wellhead Completion: Payment for all labor, equipment; and material for all work necessary and required to return IW-2 to service as required in the Contract Documents. This item includes but is not limited to backfilling and compaction of soil, forming and pouring reinforced concrete pads and pipe supports, reinstallation and testing of wellhead piping, installing power, wiring and lighting facilities, start-up and for all other work required for the Work to be completed in accordance with the Contract Documents.
- F. Item No. 6 – Replace Reclaimed Water Fire Hydrant: Payment for all labor, equipment; and material for all work necessary and required to remove an existing reclaimed water fire hydrant and to furnish and install a new reclaimed water fire hydrant in accordance with the Contract Documents.
- G. Item No. 7 – Undefined Conditions Allowance: Included in this allowance is work associated with undefined conditions or conflicts developing from undefined conditions. All work authorized for payment will be authorized in writing by the CITY. Amount to be paid per undefined conditions or conflicts shall be negotiated or agreed to by both parties.
- H. Item No. 8 – Consideration for Indemnification: In recognition of CONTRACTOR's indemnification obligations, the CITY will pay to the CONTRACTOR the specific consideration of ten dollars (\$10.00). Payment of said specific consideration shall be made at the time of the payment of the first progress estimate and the CONTRACTOR shall acknowledge payment of this consideration by letter to the CITY after receipt of the progress payment.
- I. Item No. 9 – Demobilization: Payment for completing all work including but not limited to demobilization, site cleanup and restoration in accordance with the Technical Specifications and Contract Drawings. The payment items for demobilization shall not exceed 2% of the sum of Bid Item Nos. 2 through 8.

### 1.03 SCHEDULE OF PAYMENT VALUES

- A. The CONTRACTOR shall submit a Schedule of Payment Values for review with the return of the executed Agreement to the CITY. The schedule shall contain the installed value of the component parts of Work for the purpose of making progress payments during the construction period.
- B. The schedule shall be given in sufficient detail for proper identification of Work accomplished. The Schedule of Payment Values shall directly correlate to each activity outlined in the construction progress schedule and the construction network analysis (specified in the Section 01300, Submittals) to accurately relate construction progress to the requested payment. Each item shall include its proportional share of all costs including the CONTRACTOR's overhead, contingencies and profit. The sum of all scheduled items shall equal the total value of the Contract.
- C. If the CONTRACTOR anticipates the need for payment for materials stored on the project site, it shall also submit a separate list covering the cost of materials, delivered and unloaded with taxes paid. This list shall also include the installed value of the item with coded reference to the Work items in the Schedule of Payment Values. Similar procedures shall be employed for undelivered specifically manufactured equipment and materials as specified herein.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01070 - ABBREVIATIONS

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Wherever in these specifications that references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these specifications, the following acronyms or abbreviations which may appear in these specifications shall have the meanings indicated herein.

#### 1.02 ABBREVIATIONS AND ACRONYMS

AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
ACOE	Army Corps of Engineers
ACPA	American Concrete Pipe Association
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGMA	American Gear Manufacturer's Association
AHGDA	American Hot Dip Galvanizers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
AMPP	Association for Materials Protection and Performance
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APHA	American Public Health Association
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASMM	Architectural Sheet Metal Manual
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BCHD	Broward County Health Department

BCRED	Broward County Resilient Environment Department
BHMA	Builders Hardware Manufacturer's Association
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FS	Federal Specifications
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
MBMA	Metal Building Manufacturer's Association
MTI	Marine Testing Institute
NAAM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NRCA	National Roofing Contractors Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
RCRA	Resource Conservation and Recovery Act
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings
SSPWC	Standard Specifications for Public Works Construction
SFWMD	South Florida Water Management District
UL	Underwriters Laboratories, Inc.
USEPA	United States Environmental Protection Agency

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01090 - REFERENCE STANDARDS

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Titles of Sections and Paragraphs: Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date of the opening of bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. Specialists, Assignments: In certain instances, Specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

#### 1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the specifications, all work specified herein shall conform to or exceed the requirements of all applicable codes.
- B. References herein to "Building Code" shall mean the Florida Building Code (FBC). The latest edition of the code as approved and used by the local agency as of the date of the opening of bids, as adopted by the agency having jurisdiction, shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- C. In case of conflict between codes, reference standards, Drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall follow the most stringent requirements.
- D. Applicable Standard Specifications: The CONTRACTOR shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the

referenced portions of those referenced codes, standards, and Specifications listed herein.

- E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- F. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

-END OF SECTION-

SECTION 01300 - SUBMITTALS

PART 1 -- GENERAL

1.01 THE REQUIREMENT

- A. This section specifies the means of all submittals. All submittals, whether their final destination is to the CITY, ENGINEER, or other representatives of the CITY, shall be directed through the ENGINEER. A general summary of the types of submittals and the number of copies required is as follows:

<u>Copies to ENGINEER</u>	<u>Type of Submittal</u>
1 PDF	Bar Chart Construction Schedule
1 PDF	Schedule of Payment Items
1 PDF	Progress Estimates
1 PDF	Shop Drawings
1	Record Drawings
2	Surveys

1.02 SUBMITTAL PROCEDURES

- A. The CONTRACTOR shall transmit each submittal with a form acceptable to the ENGINEER, clearly identifying the project CONTRACTOR, the enclosed material and other pertinent information specified in other parts of this section. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- B. Revise and resubmit submittals as required, identify all changes made since previous submittals. Resubmittals shall be noted as such.
- C. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.03 CONSTRUCTION PROGRESS SCHEDULE

- A. The CONTRACTOR shall prepare a bar chart for project scheduling. The CONTRACTOR shall submit its proposed progress (baseline) schedule to the ENGINEER for review and comment.

1.04 SCHEDULE OF PAYMENT ITEMS

- A. The CONTRACTOR shall submit a Schedule of Payment Items for review. The schedule shall contain the installed value of the component parts of Work for the purpose of making progress payments during the construction period and shall directly correlate on an item

by item basis to each individual activity detailed in the construction progress schedule. The sum of all scheduled items shall equal the total value of the Contract. Reference section entitled "Measurement and Payment" for further details.

#### 1.05 PROGRESS PAYMENT APPLICATIONS

- A. Applications for payments shall be made to the ENGINEER for review.

#### 1.06 SHOP DRAWINGS

- A. The CONTRACTOR shall submit electronic copies of shop drawings in Portable Document Format (PDF) format for review by all general, civil, mechanical, structural, architectural, electrical and instrumentation related improvements, including details, piping layout and appurtenances, wiring, color selection charts, materials and equipment fabricated especially for this Contract, and materials and equipment for which such Drawings are specified or specifically requested by the ENGINEER.
- B. Shop drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the Drawings.
- C. Requirements: The CONTRACTOR shall be responsible for the prompt submittal of all shop drawings so that there shall be no delay to the Work due to the absence of such drawings.
- D. All shop drawings shall be submitted to the ENGINEER through the CONTRACTOR. Each shop drawing shall be individually submitted. The CONTRACTOR is responsible for obtaining shop drawings from subcontractors and returning reviewed shop drawings to them. All Drawings shall be clearly marked with the name of the project, CITY, CONTRACTOR, specification section number and building, equipment, or structure to which the drawing applies. Drawings shall be suitably numbered stamped and signed by the CONTRACTOR. Each shop drawing shall be accompanied by a transmittal form listing the information identified above.
- E. All submissions shall be dated and properly referenced to the specifications section and Contract Drawing number.
- F. CONTRACTOR's Review: Only submittals which have been checked and corrected should be submitted to the CONTRACTOR by its subcontractors and vendors. Prior to submitting shop drawings to the ENGINEER, the CONTRACTOR shall check thoroughly all such shop drawings to satisfy itself that the subject matter thereof conforms to the Drawings and Specifications in all respects. Shop drawings which are correct shall be marked with the date, checker's name and indications of the CONTRACTOR's approval, and then shall be submitted to the ENGINEER. Other shop drawings submitted to the ENGINEER will be returned to the CONTRACTOR unreviewed.

- G. CONTRACTOR's Responsibility: The ENGINEER'S review of shop drawings will be general and shall not relieve the CONTRACTOR of the responsibility for details of design, dimensions, etc., necessary for proper fitting and construction of the Work required by the Contract and for achieving the specified performance.
- H. CONTRACTOR's Modifications: For submissions containing departures from the Contract Documents, the CONTRACTOR shall include proper explanation in their letter of transmittal. Should the CONTRACTOR submit for review equipment that requires modifications to the structures, piping, layout, etc. detailed on the Drawings, or specified, CONTRACTOR shall also submit for review details of the proposed modifications. If such equipment and modifications are accepted, the CONTRACTOR, at no additional cost to the CITY, shall do all Work necessary to make such modifications.
- I. Substitutions: Whenever a particular brand or make of material, equipment, or other item is specified, or is indicated on the Drawings, it is for the purpose of establishing a standard of quality, design, and type desired and to supplement the detailed specifications. Any other brand or make which is equivalent to that specified or indicated may be offered as a substitute subject to the following provisions:
1. The CONTRACTOR shall submit for each proposed substitution sufficient details, complete descriptive literature, and performance data together with samples of the materials, where feasible, to enable the ENGINEER to determine if the proposed substitution is equal, in all respects including, but not limited to, quality, performance, ease of maintenance, availability of spare parts, and experience record.
  2. The CONTRACTOR shall submit certified tests, where applicable, by an independent laboratory attesting that the proposed substitution is equal.
  3. A list of installations where the proposed substitution is equal. Such listing shall cover a minimum of the previous three years and will furnish project names and contact phone numbers.
  4. Where the acceptance of a substitution requires excessive review by the ENGINEER, revision or redesign of any part of the Work, all such additional review costs, revisions and redesign, and all new drawings and details required therefore, shall be at the CONTRACTOR's expense.
  5. In all cases the ENGINEER shall be the sole judge as to whether a proposed substitution is to be accepted. The CONTRACTOR shall abide by the ENGINEER's decision when proposed substitute items are judged to be unacceptable and shall in such instances furnish the item as specified. No substitute items shall be used in the Work without written acceptance of the ENGINEER.
  6. Acceptance of any proposed substitution shall in no way release the CONTRACTOR from any of the provisions of the Contract Documents.

7. The CITY may require, at CONTRACTOR's expense, a special performance guarantee or other surety with respect to any substitute.
- J. Complete Submittals: Each submittal shall be complete in all aspects incorporating all information and data required to evaluate the products' compliance with the Contract Documents. Partial or incomplete submissions shall be returned to the CONTRACTOR without review.
- K. ENGINEER's Review: The ENGINEER will review and return by email the reviewed shop drawings within 21 calendar days of receipt of such shop drawings. Reviewed shop drawings will be returned to the CONTRACTOR by email and marked with the appropriate box checked either "FURNISH AS SUBMITTED", "FURNISH AS CORRECTED" or "REVISE AND RESUBMIT".
- L. Work Prior to Review: No material or equipment shall be purchased, fabricated especially for this Contract, or delivered to the project site until the required shop drawings have been submitted, processed, reviewed by the ENGINEER and marked either "FURNISH AS SUBMITTED" or "FURNISH AS CORRECTED". All materials and Work involved in the construction shall be as represented by said shop drawings.
- M. The CONTRACTOR shall not proceed with any portion of the Work (such as the construction of foundations) for which the design and details are dependent upon the design and details of equipment for which submittal review has not been completed.

#### 1.07 RECORD DRAWINGS

- A. The CONTRACTOR shall keep and maintain, at the job site, one record set of Drawings. On these, it shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original Contract Drawings, including buried or concealed construction and utility features which are revealed during the course of construction.
- B. Final payment will not be acted upon until the CONTRACTOR-prepared record drawings have been delivered to the ENGINEER. Said up-to-date record drawings shall be in the form of a set of prints with carefully plotted information overlaid in pencil.

#### 1.08 ELEVATION CERTIFICATES

- A. Two original copies of surveys performed by a registered land surveyor.

#### PART 2 -- PRODUCTS (NOT USED)

#### PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -

## SECTION 01400 – QUALITY CONTROL

### PART 1 -- GENERAL

#### 1.01 SAMPLING AND TESTING

- A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the CITY reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER, will ensure the CITY that the quality of the work is in full accord with the Contract Documents.
- B. Any waiver by the CITY of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial Work, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests and failure of any portion of the Work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such Work in accordance with the General Conditions.

#### 1.02 SITE INVESTIGATION AND CONTROL

- A. The CONTRACTOR shall verify all dimensions in the field and shall check field conditions continuously during construction. The CONTRACTOR shall be solely responsible for any inaccuracies built into the Work due to its failure to comply with this requirement.
- B. The CONTRACTOR shall inspect related and appurtenant Work and shall report in writing to the ENGINEER any conditions which will prevent proper completion of the Work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair, or replacement caused by unsuitable conditions shall be performed by the CONTRACTOR within the scope of the Project.

#### 1.03 OBSERVATION AND TESTING

- A. Unless otherwise specified, the CITY shall employ and pay for the services of an independent testing laboratory for specified testing as specified by the ENGINEER.
- B. The work or actions of the testing laboratory shall in no way relieve the CONTRACTOR of its obligations under the Contract. The laboratory testing work will include such observations and testing required by the Contract Documents, existing laws, codes, ordinances, etc. The testing laboratory will have no authority to change the requirements of the Contract Documents, nor perform, accept or approve any of the CONTRACTOR's Work.

- C. The CONTRACTOR shall allow the ENGINEER ample time and opportunity for field observation and testing materials and equipment to be used in the Work. The CONTRACTOR shall advise the ENGINEER promptly upon placing orders for materials and equipment so that arrangements may be made, if desired, for observation before shipment from the place of manufacture. The CONTRACTOR shall at all times furnish the ENGINEER and its representatives, facilities including labor, and allow proper time for inspecting and testing materials, equipment, and installation. The CONTRACTOR must anticipate that possible delays may occur in the execution of its work due to the necessity of materials and equipment being inspected and accepted for use. The CONTRACTOR shall furnish, at its own expense, all samples of materials required by the ENGINEER for testing, and shall make its own arrangements for providing water, electric power, or fuel for the various observations and tests of structures and equipment.
- D. The CITY will bear the cost of all tests, observations, or investigations undertaken by the order of the ENGINEER for the purpose of determining conformance with the Contract Documents if such tests, observations, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever nonconformance is determined by the ENGINEER as a result of such tests, observations, or investigations, the CONTRACTOR shall bear the full cost of any additional tests and investigations, which are ordered by the ENGINEER to ascertain subsequent conformance with the Contract Documents.

#### 1.04 RIGHT OF REJECTION

- A. The ENGINEER, acting for the CITY, shall have the right, at all times and places, to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the Work at the site. If the ENGINEER or its representative, through an oversight or otherwise, has accepted materials or Work which is defective or which is contrary to the Contract Documents, such materials, no matter in what stage or condition of manufacture, delivery, or erection, may be subsequently rejected by the ENGINEER for the CITY.
- B. The CONTRACTOR shall promptly remove rejected articles or materials from the site of the Work after notification of rejection. All costs of removal and replacement of rejected articles or materials as specified herein shall be borne by the CONTRACTOR.

#### 1.05 OTHER CONSTRUCTION CONSIDERATIONS

- A. Sleeves and Openings: The CONTRACTOR shall provide all openings, chases, etc., to fit its own work and that of any other subcontractors and CONTRACTOR's. All such openings or chases shown on the Contract Drawings, or reasonably implied thereby, or as confirmed or modified by acceptable shop, setting or erecting drawings, shall be provided by the CONTRACTOR.
- B. Where pipes or conduits are to pass through slabs or walls, or where equipment frames or supports are to be installed as integral part of an opening, the sleeves, openings, forms or frames shall be furnished by the installer of the pipes, conduits or equipment, but shall be placed by the CONTRACTOR. Where hanger inserts, anchor bolts and similar items are to be embedded in concrete as an integral part of a slab or wall, they shall be

furnished by the installer of the pipe or other equipment requiring the hanger, etc, but shall be placed by the CONTRACTOR.

- D Weather Conditions: Work that may be affected by inclement weather shall be suspended until proper conditions prevail. In the event of impending storms, the CONTRACTOR shall take necessary precautions to protect all work, materials and equipment from exposure.
- E Fire Protection: The CONTRACTOR shall take all necessary precautions to prevent fires at or adjacent to the Work, including its own buildings and trailers. Adequate fire extinguisher and hose line stations shall be provided throughout the work area.

PART 2 -- PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01510 - TEMPORARY UTILITIES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. It shall be the CONTRACTOR's responsibility to provide equipment that is adequate for the performance of the Work under this Contract within the time specified. All equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required Work, and shall be subject to review by the CITY's representative at any time within the duration of the Contract. All Work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction.
- B. The CONTRACTOR shall provide for utilities and services for its own operations. The CONTRACTOR shall furnish, install and maintain all temporary utilities during the contract period including removal upon completion of the Work.

#### 1.02 POWER AND LIGHTING

- A. Power: The CONTRACTOR shall provide all necessary power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the Work in a safe and satisfactory manner.
- B. Construction Lighting: All Work conducted at night or under conditions of deficient daylight shall be suitably lighted to ensure proper Work and to afford adequate facilities for inspection and safe working conditions. Temporary lighting shall be maintained during nonworking periods if the area is subject to access by the public or CITY's personnel.
- C. Electrical Connections: All temporary connections for electricity shall be subject to review by the ENGINEER and the power company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to final acceptance of the Work.
- D. Separation of Circuits: Unless otherwise permitted by the ENGINEER, circuits separate from lighting circuits shall be used for all power purposes.
- E. Construction Wiring: All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of Subpart K of the OSHA Safety and Health Standards for Construction.

#### 1.03 WATER SUPPLY

- A. General: Except as noted otherwise, the CONTRACTOR shall make arrangements for all water used during construction including general construction used, and testing. The CONTRACTOR shall provide and maintain all piping, fittings, adapters, and valving required.
- B. Potable water is available at the site (e.g. hydrants, etc.) for the work. If a temporary connection is made to a potable water system on-site (e.g., a fire hydrant), the CONTRACTOR must provide and install a back flow prevention device and a meter. The CONTRACTOR shall provide temporary piping for the metering and use of potable water. The cost of the water for the testing will not be charged to the CONTRACTOR.

- C. Water Connections: The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency.
- D. Removal of Water Connections: Before final acceptance of the Work on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the ENGINEER and to the agency owning the affected utility.
- E. Fire Protection: The construction, and all other parts of the Work shall be connected with the CONTRACTOR's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the Work, and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The CONTRACTOR's fire protection program shall conform to the requirements of Subpart F of the OSHA Standards for Construction and all local Fire Department Requirements.

#### 1.04 TEMPORARY SANITARY FACILITIES

- A. The CONTRACTOR shall provide and maintain adequate and clean sanitary facilities for the construction work force and visitors. The facilities shall comply with local codes and regulations and be situated in an acceptable location.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01520 – MAINTENANCE OF FACILITIES AND SEQUENCE OF CONSTRUCTION

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The SRWWTP will continue to be maintained in continuous operation during the entire construction period of the Contract as hereinafter specified.
- B. The intent of this Section is to outline the requirements to complete repairs to IW-2 as shown on the Drawings.
- C. Work not specifically covered in the following paragraphs may, in general, be done at any time during the contract period, subject to the constraints and construction requirements outlined hereinafter. All references to days in this Section shall be consecutive calendar days.

#### 1.02 CONSTRUCTION SCHEDULE

- A. The construction schedule shall be submitted by the CONTRACTOR in accordance with Section 01300, Submittals of these Specifications.

#### 1.03 CONNECTION OF EXISTING SYSTEMS

- A. All connections to existing systems shall be performed in such a manner that no damage and minimal interruption is caused to the existing installation. Any damage caused to existing installations shall be repaired or replaced by the CONTRACTOR at no additional cost to the CITY.
- B. The CONTRACTOR shall be responsible for the proper containment and disposal of wastewater or other materials drained from existing pipelines and structures during construction, unless otherwise specifically noted to be performed by the CITY.
- C. The CONTRACTOR shall contain such wastewater or other materials (in accordance with all applicable codes) and shall dispose of such within the existing treatment system as approved by the CITY. The CONTRACTOR shall be responsible for the prevention of wastewater or other material spills within the Work.

#### 1.04 COORDINATION WITH UTILITY PERSONNEL

- A. Before commencing work involving removing or placing in operation existing or new facilities or tie-ins to existing facilities, the CONTRACTOR shall notify the CITY at least seven (7) days in advance, in writing. The CITY shall be responsible for removing facilities from operation as deemed necessary.
- B. Only the CITY's appointed representative can authorize the shutdown of portions of the treatment plant facilities. The CONTRACTOR shall, under no circumstances, interfere with any treatment plant facility component without the CITY's authorization, in writing, and supervision. The CONTRACTOR shall notify the CITY's representative in writing a minimum of three work days prior to each scheduled service request. This notification

shall be provided on the CITY's standard form, or on an approved equivalent form completed in full by the CONTRACTOR.

#### 1.05 GENERAL CONSTRAINTS

- A. Work under the Contract shall be scheduled and performed in such a manner as to result in the least possible disruption to the operation of the treatment plant facilities and to the public's use of roadways, driveways, parking areas, and utilities. Utilities shall include but not be limited to water, sewerage, irrigation, drainage structures, gas, electrical service and telephone. Prior to commencing with the work, CONTRACTOR shall perform a location investigation of existing underground utilities and facilities in accordance with Section 01530 entitled "Protection of Existing Facilities".
- B. All work by the CONTRACTOR that disrupts the normal treatment plant operations shall be shown on the Construction Schedule specified in Section 01300, Submittals and specifically scheduled with the CITY. Schedule notification shall consist of a written notice defining the work to be accomplished, the normal functions that will be interrupted, the duration of the interruption, and the mitigating effort to be performed by the CONTRACTOR. The written notice shall be submitted to the CITY seven (7) days in advance of the proposed work and the CITY will respond to the CONTRACTOR in writing within five (5) days of receipt of the notice regarding the acceptability of the proposed plan.
- C. If in the judgment of the CITY or ENGINEER, a requested shutdown is not required for the CONTRACTOR to perform the Work, the CONTRACTOR shall utilize approved alternative methods to accomplish the Work. Shutdowns shall not begin until all required materials are on hand and ready for installation. Each shutdown period shall commence at a time approved by the CITY, in writing. Where required in the Construction Sequence, the CONTRACTOR shall proceed with the Work continuously, (24 hours/day, 7 days/week) start to finish, until the Work is completed and normal plant operation is restored.
- D. If the CONTRACTOR completes all required Work before the specified shutdown period has ended, the CITY may immediately place the existing system back into service.
- E. The CITY shall have the authority to order Work postponed, stopped or prohibited that would, in its opinion, unreasonably result in interrupting any functions of the injection well disposal system.
- F. At no time shall the CONTRACTOR undertake to close off any pipelines, or open any valves, or take any other action which would affect the operation of the existing system, except as specifically required by the drawings and specifications, until authorization is granted by the CITY and after proper notification.
- G. Temporary installations required to complete a particular aspect of the work during the allotted time period shall be determined by the CONTRACTOR and implemented by the CONTRACTOR at no additional cost to the CITY. All such temporary installations shall be subject to the review and acceptance of the CITY.
- H. Sequence of certain major events and identification of time constraints for removing existing facilities from active service and installation of new facilities are described below. No phase of work (or tasks within a phase) shall preclude or be performed in parallel with a subsequent phase unless specifically defined so in these documents. In all cases, work

in each phase shall be checked out and accepted for satisfactory use, subject to the CITY's approval, prior to the CONTRACTOR proceeding to the next phase of construction.

- I. Critical events in the sequence of construction are specified herein. The outlined sequence of construction does not include all items necessary to complete the Work, but is intended to identify the sequence of critical events necessary to eliminate disruption to the CITY's facilities. It shall be understood by the CONTRACTOR that the critical events identified are not all inclusive and that additional items of work not shown are required. The sequence of construction is a precedence requirement and does not attempt to schedule the CONTRACTOR's work.
- J. The CONTRACTOR shall be aware that the elevations and locations of the existing utilities have been prepared from the most reliable information available to the ENGINEER; however, it shall be this CONTRACTOR's responsibility to determine the location, character and depth of any existing utilities. The CONTRACTOR shall excavate and uncover all existing utilities to determine the exact elevations, locations, type and size sufficiently in advance of its work, prior to submittal of applicable shop drawings, to ensure that all required materials are available when connections to the existing lines are to be made. The CONTRACTOR shall be responsible for furnishing such fittings, couplings, adapters and specials as required to make connections to existing piping and equipment in accordance with the details shown on the Drawings.
- K. Wastewater Dewatering: The CONTRACTOR shall be responsible for the proper containment and disposal of wastewater, chemicals, etc. drained from existing pipelines during construction. The CONTRACTOR shall contain such wastewater, chemical, etc. in accordance with all applicable codes and shall dispose of such to an on-site wastewater basin as designated by the CITY. The CONTRACTOR shall be responsible for the prevention of wastewater, chemicals, etc. spills within the work area. Refer to Division 2 for additional requirements and related requirements for construction dewatering.
- L. Cancellation of Planned Shutdown: A planned shutdown in accordance with the Contract Documents may be canceled by the CITY upon 24 hour notification by the CITY to the CONTRACTOR. Cancellations shall be expected due to wet weather conditions or other conditions beyond control of the CITY or CONTRACTOR. All efforts shall be made by the CONTRACTOR to check weather forecasts and the like prior to scheduling shutdowns. The CITY shall not be responsible for any additional costs associated with the cancellation of a planned shutdown.
- M. Treatment Plant Access: CONTRACTOR shall maintain access for plant personnel to all treatment plant unit processes at all times. If demolition, construction, or rehabilitation activities impede or obstruct access to any unit process, CONTRACTOR shall provide a temporary means for access.

#### 1.06 OVERALL SEQUENCE OF CONSTRUCTION

##### A. Mobilization/Site Preparation:

- 1. Mobilize for work – CONTRACTOR shall configure staging area as per Drawings, obtain any permits required, continue shop drawing submittals and procurement of materials.

2. For interfering utilities, CONTRACTOR shall construct new utilities up to tie-in points, perform tests, then make final connections with minimum amount of shutdown time. After acceptance of new utilities, remove existing interfering underground utilities and structures. CONTRACTOR shall provide temporary services as required to maintain continuous site drainage, treatment plant and operation, (water, control and electrical lines), etc.

B. Construction of IW-2 Repairs and Ancillary Work:

1. CONTRACTOR shall perform construction work on IW-2 as described in the Contract Documents in four phases. The first phase shall consist of temporary removal and storage of electrical and instrumentation items, excavation, removal of grout between casings, adjusting the height of the casings and the grouting of the casings. The second phase shall consist of cutting and removing the existing 24-inch casing above the uppermost joint, then welding and testing a new casing extension.
2. After completion of the second phase, FDEP will inspect the repairs. Upon acceptance of this initial part of the repairs, the CONTRACTOR shall continue making repairs to the well.
3. A third phase shall consist of mechanical integrity testing.
4. The fourth phase shall consist of backfilling and compacting the area around the well, construction of the concrete pad and pipe supports, and the reinstallation of the wellhead piping and instrumentation.
5. CONTRACTOR shall complete all startup and testing as required by the Contract Documents.
6. CONTRACTOR shall complete site restoration, site cleanup and demobilization activities.

C. Project Closeout:

1. CONTRACTOR shall complete all final punch list items.
2. CONTRACTOR shall complete project closeout in accordance with Section 01700.
3. Final acceptance of project.
4. Commence warranty period.

1.07 DETAILED SEQUENCE OF CONSTRUCTION AND OPERATIONAL CONSTRAINTS

A. Injection Well 2 Repairs

1. Requirements of Work at IW-2
  - a. The CONTRACTOR shall have an approved Work Plan in accordance with Section 13193.

- b. The CONTRACTOR shall notify the CITY in writing seven days in advance prior to commencing work at IW-2.
- c. Complete all required demolition and removal work, including concrete slabs, housekeeping pads, piping, instrumentation, equipment stands, electrical and control conduit, wiring and appurtenances as shown on the Drawings.
- d. Complete excavation, modifications of well casings, and grout removal as shown on the Drawings.
- e. Complete cutting and removal of existing 24-inch casing above the uppermost joint, then welding and testing a new casing extension
- f. Pressure test the new casing extension.
- g. Complete all work required for the painting of the existing 24-inch OD injection well piping within the limits shown on the Drawings.
- h. Complete all work required to replace the injection well reinforced concrete slab as shown on the Drawings.
- i. Complete all work required to provide concrete pad around the wellhead, pipe supports, pipe stands and equipment for IW-2 as shown on the Drawings.
- j. Complete MIT of entire IW-2.
- k. Install all valves, piping, instrumentation, pipe supports, sun shields and appurtenances to complete the injection wellhead pressure monitoring instrumentation as shown on the Drawings.
- l. Complete pressure testing and acceptance of all new and/or existing pressure instrumentation installed for injection wellhead pressure monitoring at the injection well.

B. Electrical, Instrumentation and Control work to be completed prior to startup of IW-2.

1. Requirements

- a. Reinstall existing pressure transmitters, stands, and sun shields to be reinstalled and activated at the injection well.
- b. The existing conduit and wiring shall be connected to the pressure transmitter with new conduit and wiring between IW-2 pressure instrumentation transmitters and the control panel as shown on the Drawings.
- c. CONTRACTOR shall coordinate with the CITY, all discrete and analog signal conduit, wiring, terminations, and loop tests for IW-2.
- d. CONTRACTOR shall coordinate and provide complete injection well system loop testing between IW-2 injection well to assure the well is ready for restart.

- e. Refer to the Drawings for additional instrumentation and control system requirements for completion of the work.
- C. Complete site restoration, site cleanup and demobilization activities for IW-2 repairs and related work.
- D. Complete all project closeout requirements.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01530 - PROTECTION OF EXISTING FACILITIES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. CONTRACTOR shall be responsible for the preservation and protection of property adjacent to the work site against damage or injury as a result of the CONTRACTOR's operations under this Contract. Any damage or injury occurring on account of any act, omission or neglect on the part of the CONTRACTOR shall be restored in a proper and satisfactory manner or replaced by and at the expense of the CONTRACTOR to an equal or superior condition than previously existed.
- B. CONTRACTOR shall comply promptly with such safety regulations as may be prescribed by the CITY or the local authorities having jurisdiction and shall, when so directed, properly correct any unsafe conditions created by, or unsafe practices on the part of, the CONTRACTOR's employees. In the event of the CONTRACTOR's failure to comply, the CITY may take the necessary measures to correct the conditions or practices complained of, and all costs thereof will be deducted from any monies due the CONTRACTOR. Failure of the ENGINEER to direct the correction of unsafe conditions or practices shall not relieve the CONTRACTOR of their responsibility hereunder.
- C. In the event of any claims for damage or alleged damage to property as a result of work under this Contract, the CONTRACTOR shall be responsible for all costs in connection with the settlement of or defense against such claims. Prior to commencement of work in the vicinity of property adjacent to the work site, the CONTRACTOR, at their own expense, shall take such surveys as may be necessary to establish the existing condition of the property. Before final payment can be made, the CONTRACTOR shall furnish satisfactory evidence that all claims for damage have been legally settled or sufficient funds to cover such claims have been placed in escrow, or that an adequate bond to cover such claims has been obtained.

#### 1.02 PROTECTION OF WORK AND MATERIAL

- A. During the progress of the Work and up to the date of final payment, the CONTRACTOR shall be solely responsible for the care and protection of all Work and materials covered by the Contract.
- B. All Work and materials shall be protected against damage, injury or loss from any cause whatsoever, and the CONTRACTOR shall make good any such damage or loss at their own expense. Protection measures shall be subject to the approval of the ENGINEER.

#### 1.03 BARRICADES, WARNING SIGNS AND LIGHTS

- A. The CONTRACTOR shall provide, erect and maintain as necessary, strong and suitable barricades, danger signs and warning lights along all roads accessible to the public, as required by the authority having jurisdiction, to ensure safety to the public. All barricades and obstructions along public roads shall be illuminated at night and all lights for this purpose shall be kept burning from sunset to sunrise.

- B. Each CONTRACTOR shall provide and maintain such other warning signs and barricades in areas of and around their respective work as may be required for the safety of all those employed in the work, the CITY's operating personnel, or those visiting the site.

#### 1.04 EXISTING UTILITIES AND STRUCTURES

- A. The term existing utilities shall be deemed to refer to both publicly-owned and privately-owned utilities such as electric power and lighting, telephone, water, gas, storm drains, process lines, sanitary sewers and all appurtenant structures.
- B. Where existing utilities and structures are indicated on the Drawings, it shall be understood that all of the existing utilities and structures affecting the Work may not be shown and that the locations of those shown are approximate only. It shall be the responsibility of the CONTRACTOR to ascertain the actual extent and exact location of existing utilities and structures. In every instance, the CONTRACTOR shall notify the proper authority having jurisdiction and obtain all necessary directions and approvals before performing any work in the vicinity of existing utilities.
- C. Prior to beginning any excavation work, the CONTRACTOR shall, through field investigations, determine any conflicts or interferences between existing utilities and new utilities to be constructed under this project. This determination shall be based on the actual locations, elevations, slopes, etc., of existing utilities as determined in the field investigations, and locations, elevation, slope, etc. of new utilities as shown on the Drawings. If an interference exists, the CONTRACTOR shall bring it to the attention of the ENGINEER as soon as possible. If the ENGINEER agrees that an interference exists, the ENGINEER shall modify the design as required. Additional costs to the CONTRACTOR for this change shall be processed through a Change Order as detailed elsewhere in these Contract Documents. In the event the CONTRACTOR fails to bring a potential conflict or interference to the attention of the ENGINEER prior to beginning excavation work, any actual conflict or interference which does arise during the Project shall be corrected by the CONTRACTOR, as directed by the ENGINEER, at no additional expense to the CITY.
- D. The Work shall be carried out in a manner to prevent disruption of existing services and to avoid damage to the existing utilities. Temporary connections shall be provided, as required, to insure uninterrupted of existing services. Any damage resulting from the Work of this Contract shall be promptly repaired by the CONTRACTOR at their own expense in a manner approved by the ENGINEER and further subject to the requirements of any authority having jurisdiction. Where it is required by the authority having jurisdiction that they perform their own repairs or have them done by others, the CONTRACTOR shall be responsible for all costs thereof.
- E. Where excavations by the CONTRACTOR require any utility lines or appurtenant structures to be temporarily supported and otherwise protected during the construction work, such support and protection shall be provided by the CONTRACTOR. All such work shall be performed in a manner satisfactory to the ENGINEER and the respective authority having jurisdiction over such work. In the event the CONTRACTOR fails to provide proper support or protection to any existing utility, the ENGINEER may, at their discretion, have the respective authority to provide such support or protection as may be necessary to insure the safety of such utility, and the costs of such measures shall be paid by the

## CONTRACTOR.

### 1.05 TREES WITHIN PROJECT LIMITS

- A. General: The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees on the project site, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or CITY. All existing trees which are damaged during construction shall be replaced by the CONTRACTOR or a certified tree company to the satisfaction of the CITY.
- B. Trimming: Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1 1/2 inches in diameter shall be coated with an asphaltic emulsion material.
- C. Replacement: The CONTRACTOR shall immediately notify the CITY if any tree is damaged by the CONTRACTOR's operations. If, in the opinion of the CITY, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree at its own expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the CONTRACTOR shall pay to the CITY compensatory payment acceptable to the CITY.

### 1.06 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the CITY's or agencies responsible for such facilities not less than three days nor more than seven days prior to excavation so that a representative of the respective agency can mark the exact location of the underground facilities in order to prevent damage to the facility.

### 1.07 RESTORATION OF PAVEMENT

- A. General: All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.
- B. Temporary Resurfacing: Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. Permanent Resurfacing: In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities

restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01550 - SITE ACCESS AND STORAGE

### PART 1 -- GENERAL

#### 1.01 HIGHWAY LIMITATIONS

- A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the Work. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

#### 1.02 TEMPORARY CROSSINGS

- A. General: Wherever necessary or required for the convenience of the public or individual residents at street or highway crossings, private driveways, or elsewhere, the CONTRACTOR shall provide suitable temporary bridges over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges, which written consent shall be delivered to the CITY prior to excavation. All such bridges shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges, or shall submit designs to said authority for approval, as may be required.
- B. Street Use: Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the Work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleys, ways, or parking areas. No street shall be closed to the public without first obtaining permission of the CITY and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown. Toe boards shall be provided to retain excavated material if required by the CITY or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the Work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.
- C. Traffic Control: For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of the "Manual of Uniform Traffic Control Devices, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations," published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1). The CONTRACTOR shall take all necessary precautions for the protection of the Work and the safety of the public.

All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of Subpart G, Part 1926, of the OSHA Safety and Health Standards for Construction.

- D. Street Closure: If closure of any street is required during construction, a formal application for a street closure shall be made to the authority having jurisdiction at least 30 days prior to the required street closure in order to determine necessary sign and detour requirements.

#### 1.03 CONTRACTOR'S SITE ACCESS

- A. The Work is located at the SRWWTP which maintains a perimeter chain link fence and security gates. Unless otherwise required by the CITY, delivery and employee access will be via the plant access road from Taft Street. Access through this road is restricted by an electronic gate and guard. Vehicles entering or leaving the SRWWTP will be required to check with CITY personnel via the security guard station.
- B. The CONTRACTOR will be responsible for monitoring the main gate for its personnel and equipment and materials deliveries.

#### 1.04 CONTRACTOR'S WORK AND STORAGE AREA

- A. Storage areas shall be provided within the designated staging area shown on the Drawings. The staging areas shown are general and do not indicate limits of construction. Responsibility for protection and safekeeping of equipment and materials at or near the sites will be solely that of the CONTRACTOR and no claim shall be made against the CITY by reasons of any act of an employee or trespasser. Should an occasion arise necessitating access to an area occupied by stored equipment and/or materials, the CONTRACTOR shall immediately move them. No equipment or materials shall be placed upon the CITY's property until it is acceptable to the CITY.
- B. Upon completion of the Contract, the CONTRACTOR shall remove from the storage areas all of its equipment, temporary fencing, surplus materials, rubbish, etc., and restore the areas.

#### 1.05 TRAFFIC CONTROL

- A. The CONTRACTOR shall maintain traffic and protect the public from all damage to persons and property within the Contract Limits, in accordance with all applicable federal, state and local regulations. The CONTRACTOR shall conduct its operations so as to maintain and protect access, for vehicular and pedestrian traffic, to and from all properties and business establishments and joining or adjacent to those streets affected by its operations, and to subject the public to a minimum of delay and inconvenience. Suitable signs, barricades, railing, etc., shall be erected and the Work outlined by adequate lighting

at night. Danger lights shall be provided as required. Traffic Control security officers and flaggers shall be provided as may be necessary for the protection of traffic.

- B. The use of on-site plant roads, entrance gates, parking areas and property for the CONTRACTOR's personnel parking shall not be permitted except as designated on the Drawings. The CONTRACTOR shall be responsible for enforcing on-site parking regulations. Violators of these on-site parking restrictions will be towed or booted.
- C. All dirt or debris spilled from the CONTRACTOR's trucks on existing pavements or other active areas of the facility shall be removed by the CONTRACTOR immediately.

#### 1.06 SECURITY

- A. The CONTRACTOR shall care for and protect against loss or damage of all material to be incorporated in the construction for the duration of the project and shall repair or replace damaged or lost materials and damage to structures.

#### 1.07 SAFETY AND PROTECTION DEVICES

- A. It shall be the sole responsibility of the CONTRACTOR to protect persons from injury and to avoid property damage. Adequate barricades, construction signs, torches, red lanterns, and guards as required shall be placed and maintained during the progress of the construction work for the protection of the public in compliance with all federal, OSHA and local ordinances.
- B. The CONTRACTOR shall have unit responsibility for and be required to make good, at its own expense, all damage to property or adjacent properties caused in the execution of this Contract.
- C. The CONTRACTOR shall take all necessary precautions for the safety of its employees on the job and shall comply with all applicable provisions of federal, state and municipal safety laws and regulations to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed.
- D. In the event, the CONTRACTOR's tools or materials delivered to the premises are stolen or damaged, the CONTRACTOR shall be responsible for such theft.

#### PART 2 -- PRODUCTS (Not Used)

#### PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01560 – TEMPORARY ENVIRONMENTAL CONTROLS

### PART 1 -- GENERAL

#### 1.01 EXPLOSIVES AND BLASTING

- A. The use of explosives on the Work will not be permitted.

#### 1.02 DUST ABATEMENT

- A. The CONTRACTOR shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary (as determined by the ENGINEER) to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The CONTRACTOR shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER. No separate payment will be allowed for dust abatement measures and all costs thereof shall be included in the CONTRACTOR's bid price.

#### 1.03 RUBBISH CONTROL

- A. During the progress of the Work, the CONTRACTOR shall keep the site of the Work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Work site and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

#### 1.04 SANITATION

- A. Toilet Facilities: Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.
- B. Such facilities shall be made available when the first employees arrive on the Work, shall be properly secluded from public observation, and shall be constructed and maintained in suitable numbers and at such points and in such manner as may be required.
- C. The CONTRACTOR shall maintain the sanitary facilities in a satisfactory and sanitary condition at all time and shall enforce their use. It shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the CITY, or on adjacent property.
- D. The CITY and the ENGINEER shall have the right to inspect any building or other facility erected, maintained, or used by the CONTRACTOR, to determine whether or not the sanitary regulations have been complied with.

- E. Sanitary and Other Organic Wastes: The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto.

#### 1.05 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, paint, fuel, solvent or reactant of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. The handling, storage, use and disposal of all such chemicals and disposal of residues shall be in strict accordance with all applicable rules and regulations of Federal, State and local jurisdictional agencies and the printed instructions of the manufacturer and all regulatory requirements. Copies of antidote literature shall be kept at the storage site and at the CONTRACTOR's job site office. A supply of antidotes shall be kept at the CONTRACTOR's office.

#### 1.06 NOISE CONTROL

- A. Noise resulting from the CONTRACTOR's work shall not exceed the noise levels and other requirements stated in local ordinances. The CONTRACTOR shall be responsible for curtailing noise resulting from its operation. It shall, upon written notification from the ENGINEER or noise control officers, make any repairs, replacements, adjustments, additions and furnish mufflers when necessary to fulfill requirements.

#### 1.07 EROSION ABATEMENT AND WATER POLLUTION

- A. It is imperative that any CONTRACTOR dewatering operation not contaminate or disturb the environment of the properties adjacent to the Work. The CONTRACTOR shall, therefore, schedule and control its operations to confine all runoff water from disturbed surfaces, water from dewatering operations that becomes contaminated with silt, muck and other deleterious matter, fuels, oils, bitumens, calcium chloride, chemicals and other polluting materials.
- B. The CONTRACTOR shall construct temporary silting basin(s) of adequate size and provide all necessary temporary materials, operations and controls including, but not limited to, filters, coagulants, screens, and other means necessary to attain the required discharge water quality.
- C. The CONTRACTOR shall be responsible for providing, operating and maintaining materials and equipment used for conveying the clear water to the point of discharge. All pollution prevention procedures, materials, equipment and related items shall be operated and maintained until such time as the dewatering operation is discontinued. Upon the removal of the materials, equipment and related items, the CONTRACTOR shall restore the area to the condition prior to its commencing work.
- D. The CONTRACTOR shall be responsible for acquiring all applicable permits for discharge of waters as necessary, except as may have otherwise been provided in other sections of these specifications.

#### 1.08 PRECAUTIONS DURING ADVERSE WEATHER

- A. During adverse weather, and against the possibility thereof, the CONTRACTOR shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building paper shelters, or other acceptable means. The CONTRACTOR shall be responsible for all changes caused by adverse weather.
- B. The ENGINEER may suspend construction operations at any time when, in its judgment, the conditions are unsuitable or the proper precautions are not being taken, whatever the weather conditions may be, in any season.

#### 1.09 HURRICANE PRECAUTIONS

- A. The CONTRACTOR shall take all precautions necessary to protect the job site during hurricane and storm watches and warnings in accordance with Article 51 of the Contract Documents.
- B. Within 30 days of the date of Notice to Proceed, the CONTRACTOR shall submit to the ENGINEER and CITY a Hurricane Preparedness Plan. The plan should outline the necessary measures which the CONTRACTOR proposes to perform at no additional cost to the CITY. The Plan shall be provided for informational purposes only and will not be reviewed by the ENGINEER or CITY.

#### 1.10 PERIODIC CLEANUP AND BASIC SITE RESTORATION

- A. During construction, the CONTRACTOR shall regularly remove from the site all accumulated debris and surplus materials of any kind which results from its operations. Unused equipment and tools shall be stored at the CONTRACTOR's yard or base of operations for the project.
- B. The CONTRACTOR shall perform the cleanup work on a regular basis and as frequently as ordered by the ENGINEER. Basic site restoration in a particular area shall be accomplished immediately following the installation or completion of the required facilities in that area. Furthermore, such work shall also be accomplished, when ordered by the ENGINEER, if partially completed facilities must remain incomplete for some time period due to unforeseen circumstances.
- C. Upon failure of the CONTRACTOR to perform periodic clean-up and basic restoration of the site to the ENGINEER's satisfaction, the ENGINEER may, upon five days prior written notice to the CONTRACTOR, employ such labor and equipment as it deems necessary for the purpose, and all costs resulting therefrom shall be charged to the CONTRACTOR and deducted from amounts of money that it may be due.

#### PART 2 -- PRODUCTS (Not Used)

#### PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01600 - MATERIALS AND EQUIPMENT

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The word "Products," as used herein is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of Work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.

#### 1.02 QUALITY ASSURANCE

- A. Source Limitations: To the greatest extent possible for each unit of Work, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

#### 1.03 DESIGN

- A. Equipment and appurtenances shall be designed in conformity with the ASME, AIEE, NEMA and other generally accepted applicable standards and shall be rugged construction and of sufficient strength to withstand all stresses which may occur during fabrication, testing, transportation, installation and all conditions of operation. All bearings and moving parts shall be adequately protected by bushings or other acceptable means against wear, and provision shall be made for adequate lubrication by readily accessible devices. Details shall be designed for appearance as well as utility. Protruding members, joints, corners, gear covers, etc., shall be finished in appearance.
- B. All exposed welds on machinery shall be ground smooth and the corners of structural shapes shall be rounded or chamfered.

#### 1.04 PRODUCT DELIVERY-STORAGE-HANDLING

- A. The CONTRACTOR shall deliver, handle, and store products in accordance with supplier's written recommendations and by means and methods that will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In

particular, the CONTRACTOR shall provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

#### 1.05 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in supplier's unopened containers or packaging, dry.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment including those provided by CITY, by methods to prevent soiling and damage.
- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

#### 1.06 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with supplier's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight enclosures and temperature and humidity ranges shall be maintained within tolerances required by supplier's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged to provide access for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.
- E. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

#### 1.07 MAINTENANCE OF STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make said log available to the ENGINEER on request.
- B. The CONTRACTOR shall verify that storage facilities comply with supplier's product storage requirements.
- C. The CONTRACTOR shall verify that supplier-required environmental conditions are maintained continually.

- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes is acceptable under requirements of Contract Documents.

#### 1.08 MAINTENANCE OF EQUIPMENT STORAGE

- A. For mechanical and electrical equipment in long-term storage, the CONTRACTOR shall provide a copy of the supplier's service instructions to accompany each item, with notice on enclosed instruction shown on exterior of package.
- B. Equipment shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document to the ENGINEER.

#### 1.09 LUBRICANTS

- A. During testing and prior to acceptance, the CONTRACTOR shall furnish all lubricants necessary for the proper lubrication of all equipment furnished under this Contract.

#### 1.10 SPECIAL TOOLS

- A. For each type of equipment furnished by it, the CONTRACTOR shall provide a complete set of all special tools (including calibration and test equipment) which may be necessary for the adjustment, operation, maintenance and disassembly of such equipment.
- B. Special tools shall be delivered at the same time as the equipment to which they pertain. The CONTRACTOR shall properly store and safeguard such special tools until completion of the Work, at which time they shall be delivered to the CITY.

#### 1.11 PROTECTION AGAINST ELECTROLYSIS

- A. Where dissimilar metals are used in conjunction with each other, suitable insulation shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other acceptable materials.

#### 1.12 FASTENERS

- A. All necessary bolts, anchor bolts, nuts, washers, plates and bolt sleeves shall be furnished by the CONTRACTOR in accordance herewith. Bolts shall have suitable washers and, where so required, their nuts shall be hexagonal.
- B. All bolts, anchor bolts, nuts, washers, plates, and bolt sleeves shall be Type 316 stainless steel unless otherwise specifically indicated or specified.
- C. Unless otherwise specified, stud, tap, and machine bolts shall be of the best quality refined bar iron. Hexagonal nuts of the same quality of metal as the bolts shall be used.

#### 1.13 SALVAGED AND EXCAVATED MATERIALS

- A. In the absence of special provisions in other Sections of the Specifications, salvage materials, equipment or supplies that occur are the property of the CITY and shall be

cleaned and stored as directed by the ENGINEER.

- B. All excavated materials needed for backfilling operation shall be stored on site. Where additional area is needed for stockpiling, it shall be obtained by the CONTRACTOR.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01660 – EQUIPMENT TESTING AND STARTUP

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Instrument testing and startup are requisite to satisfactory completion of the contract and, therefore, shall be completed within the contract time. The CONTRACTOR shall allow sufficient time in its construction schedule to complete testing, trouble shooting and start-up activities.
- B. As construction of the project enters the final stages of completion, the CONTRACTOR shall, in accordance with the requirements set forth in the Contract Documents, attend to the following items:
  - 1. Calibration of instruments and controls.
  - 3. Perform required testing, adjusting and balancing of project components.
  - 4. Schedule start-up and initial operation.

#### 1.02 INSTRUMENT TESTING

- A. The CONTRACTOR shall provide the services of an experienced and authorized representative of the supplier of each item of instruments (excluding minor items of equipment specifically exempted by the ENGINEER in writing), who shall visit the site of the Work and inspect, check, adjust if necessary, and approve the equipment installation. In each case, the CONTRACTOR shall arrange to have the supplier's representative revisit the job site as often as necessary until any and all trouble is corrected and the equipment installation and operation are satisfactory to the ENGINEER. The CONTRACTOR shall provide effective coordination of all parties necessary for complete system testing, including component suppliers, subcontractors, the ENGINEER, and the CITY.

#### 1.03 STARTUP

- A. The CONTRACTOR shall provide the effective coordination of all parties necessary for the successful startup, including suppliers, subcontractors, the ENGINEER, and the CITY.
- B. It is not the intent of the ENGINEER to instruct the CONTRACTOR in the startup of the facilities; however, the ENGINEER will be available prior to and during startup to provide technical support to the CONTRACTOR.
- C. The CONTRACTOR shall be required to startup the instruments, under direction of the ENGINEER and CITY, and operate it for a continuous 7-day (24 hours per day) period at design conditions. The CONTRACTOR shall be available at all times during this period to provide necessary maintenance support services as may be deemed necessary by the CITY and/or ENGINEER.
- D. The startup shall not be commenced until all required leakage tests, disinfection, and

equipment tests, as applicable, have been completed to the satisfaction of the ENGINEER.

- E. All defects in materials or quality which appear during this startup period shall be immediately corrected by the CONTRACTOR. Time lost for equipment repairs, wiring corrections, control point settings, or other reasons which actually interrupt the startup may, at the discretion of the ENGINEER, be justifiable cause for extending the startup test duration.
- F. During the startup, the CONTRACTOR shall provide the services of authorized representatives of the suppliers, in addition to those services required under operations testing, as necessary, to correct faulty equipment operation.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 01700 - PROJECT CLOSEOUT

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

##### A. Final Cleaning

1. At the completion of the Work, the CONTRACTOR shall remove all rubbish from and about the site of the Work, and all temporary structures, construction signs, tools, scaffolding, materials, supplies and equipment which the CONTRACTOR or any of their Subcontractors may have used in the performance of the Work. CONTRACTOR shall broom clean paved surfaces and rake clean other surfaces of grounds.
2. CONTRACTOR shall thoroughly clean all materials, equipment and structures; all marred surfaces shall be touched up to match adjacent surfaces; dirty air handling unit filters and burned out lights replaced as required; all glass surfaces cleaned and floors cleaned and polished so as to leave work in a clean and new appearing condition.
3. CONTRACTOR shall maintain cleaning until project, or portion thereof, is occupied by the CITY.

##### B. Site Survey

1. The CONTRACTOR shall provide final survey of all injection well IW-2 repair work including, but not limited to the following:
  - a. Top of slab elevation near each injection well.
  - b. Top of housekeeping pad elevation at each injection well.
  - c. Top elevation of all existing well casings (34, 42 and 50-inch) at each injection well, four per casing (north, east, south, and west).
  - d. Location of all electrical and instrumentation conduit and junction box modifications and additions.
2. Surveys shall be prepared by a State of Florida Registered Professional Land Surveyor.
3. Two (2) copies of the approved survey shall be furnished to the ENGINEER prior to final acceptance. CONTRACTOR shall also furnish the final survey to ENGINEER electronically in AutoCAD and PDF formats on flash drive (two copies).

##### B. Instrument Start-Up Services

1. Instrument start-up period, for the training of plant personnel, shall begin after satisfactory completion and acceptance of the field tests and coincidentally with the certified date of substantial completion for the part of the Work for which the

equipment is included. If the equipment is not covered by a certificate of substantial completion for a part of the Work, the period shall begin upon substantial completion of the project.

2. During the instrument start-up period the CONTRACTOR shall furnish, at no additional cost to the CITY the services of factory trained representatives of the equipment manufacturers for the equipment designated in the Specifications to:
  - a. Assist in the start-up and operations of the equipment.
  - b. Assist in the training of plant personnel, designated by the CITY in the proper operation and maintenance of the equipment.
- 3 The CITY shall:
  - a. Provide the necessary plant personnel to be instructed in the operation and maintenance of the equipment. The CITY's personnel shall operate all equipment.
  - b. The CONTRACTOR shall pay for fuel, power, and chemicals consumed up to the date of "certified substantial completion" except as otherwise specified herein.
4. CONTRACTOR shall be available to promptly repair all Work during the start-up period so as to cause minimum disruption to the total plant operation.
5. Upon completion of a minimum of seven (7) consecutive and continuous days of satisfactory operation, the CITY will assume operation of the instruments. If the instruments malfunction during this start-up period, the start-up period will be repeated until satisfactory operation is achieved.
6. In the event a system, instruments or component proves defective or is unable to meet specified performance criteria, the CONTRACTOR shall replace the defective item and the minimum one (1) year guarantee period, or the guarantee period called for in the Technical Specifications for the item shall start after satisfactory replacement and testing of the item.

#### C. Final Cleanup; Site Rehabilitation

1. Before finally leaving the site, the CONTRACTOR shall wash and clean all exposed surfaces which have become soiled or marked, and shall remove from the site of Work all accumulated debris and surplus materials of any kind which result from their operation, including construction equipment, tools, sheds, sanitary enclosures, etc. The CONTRACTOR shall leave all equipment, fixtures, and work, which the CONTRACTOR has installed, in a clean condition. The completed project shall be turned over to the CITY in a neat and orderly condition.
2. The site of the Work shall be rehabilitated or developed in accordance with other sections of the Specifications and the Drawings. In the absence of any portion of these requirements, the CONTRACTOR shall completely rehabilitate the site to a condition and appearance equal or superior to that which existed just prior to

construction, except for those items whose permanent removal or relocation was required in the Contract Documents or ordered by the CITY.

D. Final Inspection

1. Final cleaning and repairing shall be so arranged as to be finished upon completion of the construction work. The CONTRACTOR will make their final cleaning and repairing, and any portion of the Work finally inspected and accepted by the ENGINEER shall be kept clean by the CONTRACTOR, until the final acceptance of the entire Work.
2. When the CONTRACTOR has finally cleaned and repaired the whole or any portion of the Work, the CONTRACTOR shall notify the ENGINEER that the CONTRACTOR is ready for final inspection of the whole or a portion of the Work, and the ENGINEER will thereupon inspect the Work. If the Work is not found satisfactory, the ENGINEER will order further cleaning, repairs, or replacement.
3. When such further cleaning or repairing is completed, the ENGINEER, upon further notice, will again inspect the Work. The "Final Payment" will not be processed until the CONTRACTOR has complied with the requirements set forth, and the ENGINEER has made the final inspection of the entire Work and is satisfied that the entire Work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents.

E. Project Close Out

1. As construction of the project enters the final stages of completion, the CONTRACTOR shall, in concert with accomplishing the requirements set forth in the Contract Documents, attend to or have already completed the following items as they apply to their contract:
  - a. Required testing of project components.
  - b. Scheduling start-up and initial operation.
  - c. Correcting or replacing defective work, including completion of items previously overlooked or Work which remains incomplete, all as evidenced by the ENGINEER's "Punch" Lists.
2. Just before the ENGINEER's Certificate of Substantial Completion is issued, the CONTRACTOR shall accomplish the cleaning and final adjustment of the various components as specified in the Specifications and as follows:
  - a. Touch up marks or defects in painted surfaces and touch up any similar defects in factory finished surfaces.
3. In addition, and before the Certificate of Substantial Completion is issued, the CONTRACTOR shall submit to the ENGINEER (or to the CITY if indicated) certain records, certifications, etc., which are specified elsewhere in the Contract Documents. A partial list of such items appears below, but it shall be the CONTRACTOR's responsibility to submit any other items which are required in the

Contract Documents:

- a. Meter calibration certificates.
- b. Operation and maintenance instructions for instruments .
- c. One set of neatly marked-up record drawings showing as-built changes and additions to the Work under their Contract.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

- END OF SECTION

**DIVISION 2**  
**SITework**

## SECTION 02015 - MOBILIZATION, SITE PREPARATION AND DEMOBILIZATION

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The Work specified in this section consists of all Work necessary to move in personnel and equipment and prepare the site for construction, complete and to remove the same personnel and equipment from the site when construction is complete.
- B. The limits of the CONTRACTOR's staging area and other applicable restrictions are shown on the Drawings.

### PART 2 -- PRODUCTS

#### 2.01 TEMPORARY UTILITIES

- A. The CONTRACTOR shall provide all temporary facilities required for performing the Work as specified in Section - 01510 Temporary Utilities.

### PART 3 -- EXECUTION

#### 3.01 LAYOUT

- A. The CONTRACTOR shall set up construction facilities in a neat and orderly manner within designated areas as noted on the Staging Plan drawing of the Contract documents. It shall accomplish all required Work in accordance with applicable portions of these specifications and shall confine its operations to Work areas as shown on the drawings.

#### 3.02 DEMOBILIZATION

- A. At the completion of Work the CONTRACTOR shall remove its personnel, equipment, and temporary facilities from the site in a timely manner. The CONTRACTOR shall also be responsible for transporting all unused materials belonging to the CITY to a place of storage on site designated by the ENGINEER and for removing from the site and disposing of all other materials and debris resulting from the construction. It shall then return all areas used for its activities to a condition as noted on the Contract documents.

- END OF SECTION -

## SECTION 02050 - DEMOLITION

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall remove and dispose of or salvage any existing structure, piping, conduits, electrical equipment, mechanical equipment, or appurtenances or portions thereof, as shown on the Drawings or required to complete the project.
- B. All materials designated for disposal shall, when released by the ENGINEER, become the CONTRACTOR's property and shall be removed from the site and disposed of by the CONTRACTOR.
- C. All materials designated to be salvaged shall be carefully removed and moved to a CITY-designated location within the CITY.

#### 1.02 SUBMITTALS

- A. The CONTRACTOR shall submit for review, in accordance with Section 01300 entitled "Submittals" the proposed methods, equipment and operation sequence. Include coordination for shut-off, temporary services, continuation of service and other applicable items to ensure no interruption of operations except as herein before specified.

#### 1.03 JOB CONDITIONS

- A. Protection: The CONTRACTOR shall execute the demolition and removal work to prevent damage or injury to structures, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.
- B. Use of Explosives: The use of explosives is strictly prohibited on this project
- C. Closing or obstructing of roadways adjacent to the work by the placement or storage of materials will not be permitted. All operations shall be conducted with a minimum interference to all plant traffic.
- D. The CONTRACTOR shall repair damage done to facilities to remain, or any property belonging to the CITY.
- E. Scheduling: The CONTRACTOR shall carry out its operations so as to avoid interference with operations and work in the existing facilities.
- F. Notification: At least 48 hours prior to commencement of a demolition or removal, the CONTRACTOR shall notify the CITY in writing of its proposed removal schedule. No removals shall be started until the schedule is acceptable to the CITY.

#### 1.04 DUST CONTROL

- A. The CONTRACTOR shall use temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Existing electrical and mechanical equipment to remain shall be protected from damage, dust, and debris.

#### PART 2 – PRODUCTS (Not Used)

#### PART 3 -- EXECUTION

##### 3.01 GENERAL

- A. Prior to commencing work, the CONTRACTOR shall check all underground and exposed existing utility and process piping and all equipment in any way associated with or in proximity to the items to be removed and shall verify that the piping is inactive (abandoned) and that electric power to equipment, lighting, controls, etc., has been permanently disconnected. Active services shall be brought to the attention of the CITY for proper action.
- B. The CONTRACTOR shall remove all equipment and accessories in a professional manner and shall take all necessary precautions to avoid damaging existing equipment, piping, and structure which are to be retained. Damages shall be repaired or replaced at the expense of the CONTRACTOR.
- C. The CONTRACTOR shall proceed with the removal of the structures, equipment, piping, and appurtenances, as shown on the Drawings, in a sequence designed to maintain the facilities in continuous operation.

##### 3.02 UNAUTHORIZED REMOVAL

- A. Any equipment, piping, and appurtenances removed without proper authorization, shall be replaced to the satisfaction of the ENGINEER at no cost to the CITY.

##### 3.03 SALVAGED ITEMS

- A. Items to be salvaged as shown on the plans shall be tagged and shall remain the property of the CITY. The CONTRACTOR shall carefully move salvaged equipment to a CITY designated on-site location.

##### 3.04 DEMOLITION

- A. All materials and equipment shown on the Drawings to be removed or demolished shall become the property of the CONTRACTOR, with the exception of items tagged to be salvaged. Prior to removal of any existing equipment or piping from the site of work, the CONTRACTOR shall ascertain from the ENGINEER whether or not the particular item or items are to be salvaged. The CONTRACTOR shall dispose of all demolition materials, equipment, debris and all other items off the project site and in conformance with all existing applicable laws and regulations.

### 3.05 STRUCTURAL REMOVALS

- A. The CONTRACTOR shall remove structures to the lines and grades shown, unless otherwise indicated by the ENGINEER.
- B. All wood, concrete, brick, tile, concrete block, roofing materials, reinforcement, structural or miscellaneous metals, plaster, wire mesh and other items contained in or upon the structure shall be removed and taken from the project site. These items shall not be used in backfill.

### 3.06 MECHANICAL REMOVALS

- A. General: Mechanical removals shall consist of dismantling and removing of existing piping, equipment and other appurtenances as shown or required for the completion of the work. It shall include cutting, capping and plugging as required.
- B. Wherever piping is to be removed, adjacent pipe headers that are to remain in service shall be blanked off or plugged and then anchored in an acceptable manner.

### 3.07 ELECTRICAL REMOVALS

- A. General: Electrical removals shall consist of the removal of conduits and wires, and miscellaneous electrical equipment all as shown, specified, or required to perform the work. All existing electrical equipment to be removed shall be removed with such care as maybe required to prevent unnecessary damage, to keep existing systems in operation and to keep the integrity of the grounding systems. All wiring shall be removed back to its source and conduits shall be sealed.

### 3.08 CLEANUP

- A. The CONTRACTOR shall remove all debris, materials, piping, and miscellaneous waste products from the work described in this section shall be removed from the project as soon as possible. They shall be disposed of in accordance with applicable federal, state, and local regulations. The CONTRACTOR is responsible for determining these regulations and shall bear all costs or retain any profit associated with disposal of these items.

- END OF SECTION -

## SECTION 02224 - EXCAVATION AND BACKFILL FOR STRUCTURES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. This section consists of excavation, dewatering if required, backfill and compaction under structures required for a complete installation as shown on the Drawings and specified herein.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 3 - Concrete

#### 1.03 DEFINITIONS

- A. Maximum Density: Maximum weight in pounds per cubic foot of a specific material.
- B. Optimum Moisture: Percentage of water in a specific material at maximum density.

#### 1.04 SUBMITTALS

- A. General: Submit information and samples as specified herein to the ENGINEER for review in accordance with Section 01300 - Submittals.
- B. Sheeting System: When a sheeting system is required, drawings of the sheeting system and design computations shall be submitted to the ENGINEER prior to commencement of construction activity at the affected work. However, the review of these drawings shall in no way relieve the CONTRACTOR of the responsibility to provide a safe and satisfactory sheeting and shoring system. Sheeting and shoring shall be designed by the CONTRACTOR, and the proposed design shall be sealed by a Professional Engineer registered in the State of Florida. If the ENGINEER is of the opinion that at any point sufficient or proper supports have not been provided, it may order additional supports to be put in at the CONTRACTOR's expense.
- C. Dewatering: The CONTRACTOR shall submit its proposed methods of handling ground water and the locations at which the water will be disposed of. Methods shall be acceptable to the ENGINEER. The CONTRACTOR retains unit responsibility for requiring all necessary permits and meeting all local regulatory agency requirements prior to the start of the excavation.
- D. Structural Fill Material: The CONTRACTOR shall notify the ENGINEER of the off-site sources of structural fill and submit to the ENGINEER the grain size distribution, moisture retaining properties of the proposed fill. The CONTRACTOR shall submit a representative sample weighing approximately 50 lbs.
- E. Required Procedures:
  - 1. Obtain all necessary permits for its dewatering activities from the jurisdictional agencies including, but not limited to the South Florida Water Management District, as applicable. Submit copies of permits to the ENGINEER.

2. The CONTRACTOR shall not place any footing reinforcement until the excavations have been tested for compaction.

#### 1.05 QUALITY CONTROL

- A. An independent testing laboratory will be retained by the CITY to do appropriate testing as described in Section 01400 - Quality Control. The CONTRACTOR shall schedule its Work so as to permit a reasonable time for testing before placing succeeding lifts and shall keep the laboratory informed of its progress. In the event any test shows the work is not in conformance with these contract documents, the cost of any subsequent testing to show conformance shall be borne by the CONTRACTOR.

#### 1.06 JOB CONDITIONS

- A. The CONTRACTOR shall satisfy itself as to the character and amount of different soil materials, groundwater and the subsurface conditions to be encountered in the Work to be performed. Information and data, when furnished, are for the CONTRACTOR's general information. However, it is expressly understood that any interpretation or conclusion drawn therefrom is totally the responsibility of the CONTRACTOR. ENGINEER and CITY assumes no liability for the accurateness of the data reported.
- B. The CONTRACTOR shall note that previous subsurface investigations have indicated that ground water was encountered and measured to a depth of less than three feet below existing grade. Actual water table levels may fluctuate during construction.
- C. The CONTRACTOR shall locate existing underground utilities in areas of work. Test pits and hand excavation in critical areas will be required prior to initiating work.
- D. All existing utilities including piping, electrical conduits, electrical ductbanks and telephone cable that are shown on the contract documents to be relocated, shall be relocated prior to initiating earthwork. The CONTRACTOR shall coordinate relocation of utilities with utility companies having jurisdiction in the area.

#### 1.07 GROUNDWATER

- A. The CONTRACTOR shall be responsible for anticipating groundwater conditions and shall provide positive control measures as required. Such measures shall ensure stability of excavations, groundwater pressure control, prevention of tanks, pipes, and other structures from being lifted by hydrostatic pressures, and avoiding the disturbance of subgrade bearing materials.

#### 1.08 PROHIBITION OF BLASTING

- A. The use of explosives for excavation Work is strictly prohibited on this project.

#### 1.09 PROTECTION OF PROPERTY AND STRUCTURES

- A. The CONTRACTOR shall, at its own expense, sustain in place and protect from direct or indirect injury, all pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of its Work. Such sustaining shall be done by the CONTRACTOR. The CONTRACTOR shall take all risks attending the presence of

proximity of pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of his Work. It shall be responsible for all damage, and assume all expenses, for direct or indirect injury and damage, caused by its Work, to any such pipe, structures, etc., or to any person or property, by reason of injury to them, whether or not such structures, etc., are shown on the Drawings.

## PART 2 -- PRODUCTS

### 2.01 STRUCTURAL FILL MATERIAL

- A. Materials shall be furnished from acceptable off-site sources as required. Structural fill material shall consist of limerock and fine to medium sand with less than 12 percent passing the No. 200 sieve, free of rubble, organics, clay, debris, and other unsuitable material. Broken Portland cement or asphaltic concrete will not be considered an acceptable fill material.
- B. Unsuitable fill Material: Classified as A-2-4, A-2-5, A-2-6, A-2-7, A-4, A-5, A-6, A-7, and A-8, in accordance with AASHTO designation M145. Also peat and other highly organic soils.

### 2.02 CRUSHED STONE

- A. Crushed stone placed below foundation slabs shall be hard, durable, subangular particles of proper size and gradation, and shall be free from organic materials, wood, trash, sand, caulk, excess fines, and other deleterious materials. Maximum aggregate size shall be 3/- inches.

## PART 3 -- EXECUTION

### 3.01 SITE PREPARATION

- A. Clear and grub all surface vegetation, excavating and removing all material clean to a suitable bearing soil area plus a six foot margin from the exterior foundation lines. Remove all tree stumps, concentration of roots and other deleterious materials. Stockpile usable topsoil for landscaped areas as directed by the ENGINEER.
- B. Any existing foundations shall be demolished and removed from the site. All fill material used on the site below structures shall be from off-site sources. The subgrade shall be proofrolled and compacted using vibratory compaction to the requirements of subsection 3.07. Soil which ruts or deflects under the Vibratory roller shall be replaced with dry structural fill meeting the requirements of section 2.01.

### 3.02 EXCAVATION

- A. General: All excavation shall be made in such a manner, and to such widths, as will give ample room for properly constructing and inspecting the structures they are to contain. Excavation shall be made in accordance with the details shown on the Drawings, and as specified herein. Attention shall be given to the handling of storm water runoff.

- B. Excavated unsuitable material shall be removed from the site and disposed of by the CONTRACTOR.
- C. Excavated material that is suitable for use as backfill may be used for grading on site where sufficient material is not available. Material in excess of backfill requirements shall be disposed off-site by the CONTRACTOR.

### 3.03 UNAUTHORIZED EXCAVATION

- A. Excavation work carried outside of the Work limits required by the Contract Documents shall be at the CONTRACTOR's expense, and shall be backfilled by the CONTRACTOR at its own expense with suitable material, as directed by the ENGINEER. Where, in the judgment of the ENGINEER, such over-excavation requires use of lean concrete or crushed stone, the CONTRACTOR, at its expense shall furnish and place such materials.

### 3.04 SHEETING AND BRACING

- A. Walls of the excavation shall be sloped and, if required to protect the safety of Workmen, the general public, this or other Work or structure, or excavation walls, the excavation shall be properly sheeted and braced for conditions encountered and OSHA requirements.
- B. Excavation for the structures shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation, sheeting, or bracing, of not less than 2 feet. Materials encountered in the excavation which have a tendency to slough or flow into the excavation, undermine the bank, weaken the overlying strata, or are otherwise rendered unstable by the excavation operation shall be retained by sheeting, stabilization, grouting or other acceptable methods.
- C. Sheeting may be removed (unless specifically noted to be left in place) provided its removal will not jeopardize existing or new pipes or structures. Any sheeting left in place shall be cut-off 2 feet below finish grade, or as directed. The CONTRACTOR will not receive extra compensation for sheeting left in place or the cut off work required.

### 3.05 REMOVAL OF WATER

- A. It is the basic intent of these Specifications that excavations shall be free from water before pipe or structures are installed.
- B. The CONTRACTOR shall provide pumps, well points, and other appurtenant equipment necessary to remove and maintain water at such a level as to permit construction in a dry condition except where authorized tremie concrete construction Work is shown or permitted. The groundwater level shall be controlled so as to permit the placing and curing of concrete and the maintenance of supporting foundations and adjacent Work and structures. The dewatering system and points of discharge shall meet all local regulatory requirements and be subject to review and acceptance by the ENGINEER prior to the commencement of work. The CONTRACTOR shall retain unit responsibility for meeting the requirements of all local jurisdictional agencies.
- C. The CONTRACTOR shall use dewatering systems that include automatic starting devices, and standby pumps that will ensure continuous dewatering in the event of an outage of one or more pumps. It shall be totally responsible for protecting structures from flotation until

final acceptance of the Work. The CONTRACTOR shall also modify the dewatering system during the course of construction to satisfy faults, legitimate complaints or legal requirements.

- D. Groundwater shall be maintained two to three feet below the excavation in order to permit compaction in dry conditions.

### 3.06 BACKFILLING AND COMPACTION

- A. General: Select structural fill material shall be used for all backfilling Work. Fills under mats and footing shall be placed in the dry with loose lift thicknesses of 8 inches or less. Each lift of fill and all subgrades under structures shall be compacted to achieve a minimum of 95% modified Proctor maximum dry density in accordance with ASTM D 1557. Testing shall be as noted at the end of this Section. The CONTRACTOR shall coordinate and cooperate with the testing laboratory as described in Article 1.05. Materials which yield excessively during the compaction shall be undercut and replaced with well compacted structural fill.

- B. Compaction must achieve a minimum density of 95 percent of soils modified Proctor Density as tested for the depth of 2 ft. to 3 ft. below foundation level.

1. Proof roll the exposed stripped and excavated surface area by means of an approved heavy vibratory roller (Dynapac CA25 or equal) until ten (minimum) passes have been made and a soil density of 95 percent of maximum modified Proctor Density (ASTM D-1557) has been achieved twenty-four inches below the exposed compacted surface. Test compaction as specified. Add water if necessary to bring up moisture to optimum levels. Replace all material if determined to be deleterious in areas that "yield" during the final rolling operation and replace with suitable fill material.
2. Heavy vibratory equipment (Dynapac CA25 or equal) should be used only in areas greater than 75 feet from existing structures. Within 75 feet of any existing structure, non-vibratory compaction equipment such as a heavy rubber-tired front-end loader with a minimum bucket capacity of three cubic yards should be used. The bucket should be kept full during compaction operations to increase weight. A sufficient number of passes should be made within the construction area to compact the in-place soil to a minimum density of 95% (ASTM D-1557) as tested for the depth of two (2) feet below footing bottoms and slabs on-grade.
3. If ground water is within twelve to twenty-four inches from the ground surface, it will be necessary to lower the ground water to permit effective compaction. Lowering of the ground water may be accomplished by excavating four to five feet deep ditches around the construction area and pumping from sumps in the bottom of ditches.

- C. Equipment and Miscellaneous Pads:

1. Equipment Pads and Slabs on Grade: Cut, fill and compact subgrades for concrete slabs to required grade. Compact top 8-inches of concrete slab subgrade in cut sections and all fill material to a density of not less than 95 percent of its maximum density 12" below the surface as determined by ASTM D-1557.
2. Test compaction of all structural fill by a testing lab as specified in Article 3.07.

- D. Final Grades: Final fill grades shall be within 0.1 foot of elevations shown. Unless otherwise shown on the Drawings, surfaces shall be sloped for drainage or other purposes.
- E. Backfill Against Structures: Backfill against concrete or masonry structure shall not be performed until the Work has been reviewed by the ENGINEER and backfilling permitted. Backfill against walls shall also be deferred until the structural slab for floors above the top fill line have been placed and attained design strength (or earlier at the discretion of the ENGINEER). Partial backfilling against adequately braced walls may be considered by the ENGINEER on an individual situation basis. Where walls are to be waterproofed all Work shall be completed and membrane materials dried or cured according to the manufacturers instructions before backfilling.

3.07 TESTING

- A. All soil testing and earthwork monitoring will be done by a testing company in conformance with Paragraph 1.05. Notify the Testing Lab in time to be on hand to make the tests required by these specifications. The testing lab will inform the project superintendent of its findings for designating areas which will require corrective Work.
- B. Optimum moisture content of fill material will be determined by Modified Proctor Method (ASTM D-1557). Field density tests will be conducted to verify compaction in accordance with ASTM D-1556, ASTM D-2927, or ASTM D-2922.
- C. Compaction tests that fail to pass after additional compaction will continue to be reworked by the CONTRACTOR until the specified minimum compaction is achieved. Two additional tests shall be taken for each failed test. Cost of all rework and retests shall be borne by the CONTRACTOR.

D. Field Density Tests for Each Structure

Stripped Area	1 Test /1500 S.F. (2 Min below each structure or pad)
Filled Area	1 Test/1500 S.F./Each Layer (3 Min below each structure or pad)
Bottom of Wall Footings	1 Test/75 L.F. (3 Min below each structure or pad)
Backfill within Foundation Walls	1 Test/750 S.F./ Each Layer
Column Footings	1 Test/Every 2 footings

E. Optimum Moisture Content

Existing Stripped Area (Proctor)	1 Test (min)/Structure
Backfill Material Proctor	1 Test/500 C.Y./Source

- END OF SECTION -

## SECTION 02500 - SURFACE RESTORATION

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Items specified in this Section include repairs to landscaped and grassed areas that may be damaged or disturbed by CONTRACTOR activities.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02510 – Asphaltic Concrete Pavement.

#### 1.03 SUBMITTALS

- A. The CONTRACTOR shall submit submittals for review in accordance with the Section 01300 - Submittals.

#### 1.04 PROTECTION OF EXISTING IMPROVEMENTS

- A. The CONTRACTOR shall be responsible for the protection of all pavements and other improvements within the work area. All damage to such improvements, as a result of the CONTRACTOR's operations, beyond the limits of the work of pavement replacement shall be repaired by the CONTRACTOR at its expense.

### PART 2 -- PRODUCTS

#### 2.01 REPLACEMENT TREES, GROUND COVER AND SHRUBS

- A. Replacement trees, ground cover and shrubs shall be of the same type and size and sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae.

### PART 3 – EXECUTION (Not Used)

- END OF SECTION -

## SECTION 02510 - ASPHALTIC CONCRETE PAVEMENT

### PART 1 - GENERAL

#### 1.01 THE REQUIREMENT

- A. Construct asphaltic concrete pavement in accordance with the lines, grades and typical sections as indicated on the Drawings, specified herein and as required for a complete installation.
- B. Replace and / or repair all existing asphaltic concrete pavement areas impacted by contractor operations, including trenching for new utilities, as well as damage that may result from contractor operations during the progress of the Work.
- C. Temporary asphalt / trench repairs shall be installed within 1 week of excavation and backfill work on plant roadways impacted by construction.

#### 1.02 SUBMITTALS

- A. The CONTRACTOR shall submit its proposed formulae for the asphaltic concrete paving for review in accordance with the Section entitled "Submittals".

#### 1.03 QUALITY CONTROL

- A. The phrase "DOT Specifications" shall refer to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. The DOT Specifications, are referred to herein and are hereby made a part of this Contract to the extent of such references, and shall be as binding upon the Contract as though reproduced herein in their entirety.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS

- A. Limerock Base: The limerock base shall consist of two courses of Miami Oolite limerock in accordance with Sections 200 and 911 of the DOT Specifications.
- B. Prime Coat: The material used for the prime coat shall be cut-back Asphalt Grade RC-70 conforming to Sections 300 and 916 of the DOT Specifications for prime to be used on Miami Oolite formation limerock.
- C. Asphaltic Concrete: Type SP 9.5 and SP 12.5 meeting the requirements in Section 334 of the DOT Specifications.
- D. Reclaimed Asphalt: Reclaimed asphalt shall not be utilized.
- E. Tack Coat: The material used for the tack coat shall be emulsified asphalt grade RS-2 conforming to DOT Sections 300 and 916.

## PART 3 -- EXECUTION

### 3.01 PAVEMENT REMOVAL

- A. Protection of Existing Facilities and Structures: All existing utility castings, including valves boxes, junction boxes, maintenance access structures, handholes, pull boxes, inlets and similar structures in the areas of trench restoration and pavement replacement shall be protected and shall be adjusted by the CONTRACTOR to bring them flush with the surface of the finished work, at no additional cost to the CITY.
- B. Traffic loops removed or damaged during construction, or rendered inoperative because of cutting the traffic loop home run, shall be replaced. New traffic loops will be required; splicing will not be allowed.
- C. Asphalt Removal: Refer to Drawings for locations of asphalt removal.

### 3.02 INSTALLATION

- A. Subgrade: Roadway subgrades shall be stabilized to the minimum depth shown on the Drawings to a Florida Bearing Value (F.B.V.) of not less than 75. Stabilizing shall be type B as defined in Section 160-2 of the DOT specifications. Stabilization may require the addition and thorough mixing in of crushed limerock, coarse limerock screenings, or any other stabilizing material acceptable to the ENGINEER. The stabilizing material shall be applied in such quantity that, after mixing and blending, the subgrade will have a F.B.V. of not less than 75. Stabilizing material shall be mixed or blended in the subgrade material by plowing, scarifying, diking, harrowing, blading and mixing with rotary tillers until the mixed materials are of uniform bearing value throughout the width and depth of the layer being processed. The minimum acceptable density at any location will be 98 % of maximum dry density as determined by AASHTO T-180.
- B. At least three density determinations shall be made on each day's final compaction operations on each course and the density determinations shall be made at more frequent intervals if deemed necessary by the ENGINEER.
- C. Limerock Base: The limerock base shall be constructed in accordance with Section 200 of the DOT Specifications, to the thickness and width indicated on the Drawings. Pavement base shall be constructed in two lifts.
- D. After spreading of the base material is completed, the entire surface shall be scarified and shaped so as to produce the exact grade and cross section after compaction. For double course base, this scarifying shall extend a depth sufficient to penetrate slightly the surface of the first course. The maximum depth of each lift shall be 6 inches.
- E. When the material does not have the proper moisture content to insure the required density, wetting or drying shall be required. If the material is deficient in moisture, water will be added and uniformly mixed in by diking the base course to its full depth. If the material contains an excess of moisture, it shall be allowed to dry before being compacted. Wetting and drying operations shall involve manipulation of the entire width and depth of the base as a unit. As soon as proper conditions of moisture are attained, the material shall be compacted to an average density not less than 98% of maximum

dry density as determined by AASHTO T-180. Where the base is being constructed in more than one course, the density shall be obtained in each lift of the base.

- F. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross section, the compacting operations for such areas shall be completed prior to making the density determination on the finished base.
- G. Unless otherwise directed by the ENGINEER, the surface shall be "hard-planed" with a blade grader immediately prior to the application of the prime coat to remove the thin glaze or cemented surface and to allow free penetration of the prime material. The materials planed from the base shall be removed from the base area.
- H. If cracks or checks appear in the base, either before or after priming, which in the opinion of the ENGINEER, would impair the structural efficiency of the base course, the CONTRACTOR shall remove such cracks or checks by reclarifying, reshaping, adding base material where necessary and recompacting, at no additional cost to the CITY.
- I. Mixing Base and Subgrade: If at any time the subgrade material shall become mixed with the base course material, the CONTRACTOR shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.
- J. Prime Coat: The prime coat shall be applied at a rate of 0.15 gallons per square yard and the work performed in accordance with Section 300 of the DOT Specifications.
- K. Asphaltic Concrete: The spreading, compacting and jointing the wearing surface shall be in accordance with Sections 330 and 333 of the DOT Specifications to the thickness indicated on the Drawings.
- L. Tack Coat: Apply tack coat at a rate between 0.02 and 0.10 gallons per square yard, and perform the Work in accordance with Section 300 of the DOT Specifications.

### 3.03 TEMPORARY TRENCH REPAIR OR STABILIZATION

- A. Following trenching and backfill within active plant roadways, but prior to final asphalt replacement at substantial completion, the CONTRACTOR shall install temporary trench repair, consisting of compacted base course and temporary asphalt.
- B. Temporary trench repair shall include the preparation of the subgrade, the placing and compacting of the limerock base, the priming of the base, the placing and maintaining of the surface treatment, all as specified herein.
- C. The width of trench repairs shall extend at least 12 inches beyond the limits of the asphalt impacted by excavation. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other approved method so as to provide a clean edge to abut the repair. The line of the repair shall be reasonably uniform with no unnecessary irregularities.

### 3.04 PAVEMENT MARKINGS

- A. All existing markings (i.e., lanes, edge of pavement, parking stalls, etc.) impacted by the CONTRACTOR during construction shall be replaced with new painted items in accordance with the requirements of Section 971 of the DOT Specifications. CONTRACTOR shall develop a striping plan to match what is existing prior to milling and resurfacing.

### 3.05 CONNECTIONS WITH EXISTING FACILITIES

- A. Where the bituminous pavement is to be connected with an existing roadway surface or other facility, the CONTRACTOR shall modify the existing roadway profile in such a manner as to produce a smooth riding connection to the existing facility.
- B. Where it is necessary to remove existing asphalt surfaces to provide proper meet lines and riding surfaces, the CONTRACTOR shall saw cut the existing surface so that there will be sufficient depth to provide a minimum of 1-inch of asphalt concrete, and the waste material shall be disposed of to the satisfaction of the ENGINEER. Prior to placing the asphalt concrete, these areas shall be tacked. Meet lines shall be straight and the edges vertical. The edges of meet line cuts shall be painted with liquid asphalt or emulsified asphalt prior to placing asphalt concrete. After placing the asphalt concrete, the meet line shall be sealed by painting with a liquid asphalt or emulsified asphalt and immediately covered with clean, dry sand.

### 3.06 SURFACE TOLERANCE

- A. Tests for conformity with the specified grade shall be made immediately after initial compression. Any variation shall be immediately corrected by the removal or addition of materials and by continuous rolling.
- B. The completed surface of the pavement shall be of uniform texture, smooth, uniform as to grade, and free from defects of all kinds. The completed surface shall not vary more than 1/8 inch from the lower edge of a 12-foot straightedge placed on the surface along the centerline or across the trench.
- C. After completion of the final rolling, the smoothness and grade of the surface shall again be tested by the CONTRACTOR.
- D. When deviations in excess of the above tolerances are found, the pavement surface shall be corrected as stated in Section 330-12.4 of the DOT Specifications.
- E. All areas in which the surface of the completed pavement deviates more than twice the allowable tolerances described above shall be removed and replaced to the satisfaction of the ENGINEER

### 3.07 WEATHER CONDITIONS

- A. Asphalt shall not be applied to wet material. Asphalt shall not be applied during rainfall or any imminent storms that might adversely affect the construction. The ENGINEER will determine when surfaces and materials are dry enough to proceed with construction.

Asphalt concrete shall not be placed during heavy rainfall or when the surface upon which it is to be placed is wet.

### 3.08 PROTECTION OF STRUCTURES AND ADJUSTMENT OF APPURTENANCES

- A. Provide whatever protective coverings may be necessary to protect the exposed portions of bridges, culverts, curbs, gutters, posts, guard fences, road signs, and any other structures from splashing oil and asphalt from the paving operations. Remove any oil, asphalt, dirt, or any other undesirable matter that may come upon these structures by reason of the paving operations.
- B. Where water valve boxes, maintenance access structures, catch basins, or other underground utility appurtenances are within the area to be surfaced, the CONTRACTOR shall adjust the covers of these improvements to conform with the proposed surface elevations.
- C. In this effort, the CONTRACTOR shall be responsible for ensuring that appurtenances are brought to proper grade to conform with finished surface elevations and any delays experienced from such obstructions will be considered as incidental to the paving operation. No additional payment will be made. Protect all covers during asphalt application.

### 3.09 PAVEMENT WARRANTY

- A. Settlement of replaced pavement over trenches within the warranty period shall be considered the result of improper or inadequate compaction of the sub-base or base materials. The CONTRACTOR shall promptly repair all pavement deficiencies noted during the warranty period at the CONTRACTOR's sole expense.

- END OF SECTION -

**DIVISION 3**  
**CONCRETE**

## SECTION 03100 - CONCRETE FORMWORK

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall design and furnish all materials for concrete formwork, bracing, and supports and shall design and construct all falsework, all in accordance with the provisions of the Contract Documents.

#### 1.02 RESPONSIBILITY

- A. The design and engineering of the formwork as well as safety considerations are the responsibility of the CONTRACTOR.

#### 1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals.
- B. Section 03200 - Concrete Reinforcement.
- C. Section 03300 - Cast-in-Place Concrete.
- D. Section 03315 - Grout

#### 1.04 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.

##### 1. Codes and Standards

- a. The Building Code, as referenced herein, is the Florida Building Code (FBC).

##### 2. Government Standards

- a. PS 1 U.S. Product Standard for Concrete Forms, Class I.

##### 3. Commercial Standards

- a. ACI 347 Recommended Practice for Concrete Formwork.
- b. ACI 318 Building Code Requirements for Structural Concrete.
- c. ACI 350 Code Requirements for Environmental Engineering Concrete Structures.

## 1.05 SUBMITTALS

- A. Submit the following in accordance with Section 01300, Submittals.
  - 1. Manufacturer's data on proposed form release agent.
  - 2. Manufacturer's data on proposed formwork system including form ties.

## 1.06 QUALITY ASSURANCE

- A. The variation from established grade or lines shall not exceed 1/4 inch in 10 feet and there shall be no offsets or visible bulges or waviness in the finished surface. All tolerances shall be within the "Suggested Tolerances" specified in ACI 347. The CONTRACTOR shall grind smooth all fins and projections between formwork panels as directed by the ENGINEER.
- B. Curved forms shall be used for curved and circular structures that are cast-in-place. Straight panels will not be acceptable for forming curved structures.

## PART 2 -- PRODUCTS

### 2.01 FORM MATERIALS

- A. Except as otherwise expressly accepted by the ENGINEER, all lumber brought on the job site for use as forms, shoring, or bracing shall be new material. All forms shall be smooth surface forms and shall be of the following materials:

Footing sides	-	Construction grade Southern Pine or Plywood
Walls	-	Steel or plywood panel
Columns	-	Steel, plywood or fiber glass
Roof and floor Slabs	-	Plywood
All other work	-	Steel panels, plywood or tongue and groove lumber

- B. Materials for concrete forms, formwork, and falsework shall conform to the following requirements:
  - 1. Lumber shall be Southern Pine, construction grade or better, in conformance with U.S. Product Standard PS20.
  - 2. Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Pine plywood manufactured especially for concrete formwork and shall conform to the requirements of PS I for Concrete Forms, Class I, and shall be edge sealed. Thickness shall be as required to support concrete at the rate it is placed, but not less than 5/8-inch thick.

### 2.02 PREFABRICATED FORMS

- A. Form materials shall be metal, wood, plywood, or other acceptable material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line, and grade indicated. Metal forms shall be an acceptable type that will accomplish such

results. Wood forms for surfaces to be painted shall be Medium Density Overlaid plywood, MDO Ext. Grade.

## 2.03 FORMWORK ACCESSORIES

- A. Exterior corners in concrete members shall be provided with 3/4-inch chamfers. Re-entrant corners in concrete members shall not have fillets unless otherwise shown.
- B. Form ties shall be provided with a plastic cone or other suitable means for forming a conical hole to ensure that the form tie may be broken off back of the face of the concrete. The maximum diameter of removable cones for rod ties, or of other removable form-tie fasteners having a circular cross-section, shall not exceed 1-1/2 inches; and all such fasteners shall be such as to leave holes of regular shape for reaming.
- C. Form ties for water-retaining structures shall have integral waterstops. Removable taper ties may be used when acceptable to the ENGINEER. At locations where acceptable, a preformed neoprene or polyurethane tapered plug sized to seat at the center of the wall shall be inserted in the hole left by the removal of the taper tie.
- D. Form release agent shall be a blend of natural and synthetic chemicals that employs a chemical reaction to provide quick, easy and clean release of concrete from forms. It shall not stain the concrete and shall leave the concrete with a paintable surface. Formulation of the form release agent shall be such that it would minimize formation of "Bug Holes" in cast-in-place concrete.

## PART 3 -- EXECUTION

### 3.01 EXAMINATION

- A. Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. The CONTRACTOR shall assume full responsibility for the adequate design of all forms, and any forms which are unsafe or inadequate in any respect shall promptly be removed from the Work and replaced at the CONTRACTOR's expense. A sufficient number of forms of each kind shall be provided to permit the required rate of progress to be maintained. The design and inspection of concrete forms and falsework, shall comply with applicable local, state and Federal regulations. Plumb and string lines shall be installed before concrete placement and shall be maintained during placement. Such lines shall be used by CONTRACTOR's personnel and by the ENGINEER and shall be in sufficient number and properly installed. During concrete placement, the CONTRACTOR shall continually monitor plumb and string line form positions and immediately correct deficiencies.
- B. Concrete forms shall conform to the shape, lines, and dimensions of members as called for on the Drawings, and shall be substantially, free from surface defects, and sufficiently tight to prevent leakage. Forms shall be properly braced or tied together to maintain their position and shape under a load of freshly-placed concrete.
- C. All forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the

concrete. Suitable and effective means shall be provided on all forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, offsets, or similar surface defects in the finished concrete. Plywood, 5/8 inch and greater in thickness, may be fastened directly to studding if the studs are spaced close enough to prevent visible deflection marks in the concrete. The forms shall be tight so as to prevent the loss of water, cement and fines during placing and vibrating of the concrete. Specifically, the bottom of wall forms that rest on concrete footings or slabs shall be provided with a gasket to prevent loss of fines and paste during placement and vibration of concrete. Such gasket may be a 1 to 1-1/2-inch diameter polyethylene rod held in position to the underside of the wall form. Adequate clean-out holes shall be provided at the bottom of each lift of forms. The size, number, and location of such clean-outs shall be as acceptable to the ENGINEER.

- D. Concrete construction joints will not be permitted at locations other than those shown or specified, except as may be acceptable to the ENGINEER. When a second lift is placed on hardened concrete, special precautions shall be taken in the way of the number, location, and tightening of ties at the top of the old lift and bottom of the new to prevent any unsatisfactory affect whatsoever on the concrete. Pipe stubs and anchor bolts shall be set in the forms where required.

### 3.02 EARTH FORMS

- A. All vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is called for on the Drawings. Not less than 1 inch of concrete shall be added to the thickness of the concrete member as shown where concrete is permitted to be placed against trimmed ground in lieu of forms. Such permission will be granted only for members of comparatively limited height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until the concrete has been placed.

### 3.03 FOOTINGS, SLAB EDGES AND GRADE BEAMS

- A. Provide wood side forms for all footings, slab edges and grade beams.

### 3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

### 3.05 INSERTS, EMBEDDED PARTS AND OPENINGS

- A. Embedded Form Ties: Holes left by the removal of form tie cones shall be reamed with suitable toothed reamers so as to leave the surface of the holes clean and rough before being filled with mortar as specified in Section 03350 entitled "Concrete Finishes". Wire ties for holding forms will not be permitted. No form-tying device or part thereof, other than metal, shall be left embedded in the concrete. Ties shall not be removed in such manner as to leave a hole extending through the interior of the concrete members. The use of snap-ties which cause spalling of the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall

remain embedded and shall terminate not less than 1-inch back from the formed face or faces of the concrete.

### 3.06 FORM CLEANING

- A. Forms may be reused only if in good condition and only if acceptable to the ENGINEER. Light sanding between uses will be required wherever necessary to obtain uniform surface texture on all exposed concrete surfaces. Exposed concrete surfaces are defined as surfaces which are permanently exposed to view. Unused tie rod holes in forms shall be covered with metal caps or shall be filled by other methods acceptable to the ENGINEER.

### 3.07 FORMWORK TOLERANCES

- A. Formwork shall be constructed to ensure that finished concrete surfaces will be in accordance with the tolerances listed in ACI 347.

1. The following construction tolerances are hereby established and apply to finished walls and slab unless otherwise shown in the Drawings:

a.. Variation from plumb:

- |     |   |         |
|-----|---|---------|
| i.  | In the lines and surfaces of columns, piers, walls, and in arises:              |         |
|     | In any 10 ft of length  | 1/4 in. |
|     | Maximum for the entire length   | 1 in.   |
| ii. | For exposed corner columns, control-joint grooves, and other conspicuous lines: |         |
|     | In any 20 ft length   | 1/4 in. |
|     | Maximum for the entire length   | 1/2 in. |

b. Variations from the level or from the grades specified in the contract documents:

- |     |  |         |
|-----|--|---------|
| i.  | In slab soffits, ceilings, beam soffits and in arises, measured before removal of supporting shores: |         |
|     | In any 10 ft of length   | 1/4 in. |
|     | In any bay or in 20 ft length  | 3/8 in. |
| ii. | In exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines:                |         |
|     | In any bay or in 20 ft length  | 1/4 in. |
|     | Maximum for the entire length  | 1/2 in. |

c. Variation of the linear building lines from established position in plan and related position of columns, wall, and partitions:

- |  |                               |         |
|--|-------------------------------|---------|
|  | In any bay                    | 1/2 in. |
|  | In any 20 ft of length        | 1/2 in. |
|  | Maximum for the entire length | 1 in.   |

d. Variation in the sizes and location of sleeves, floor openings, and wall openings

±1/4 in.

e. Variation in cross-sectional dimensions of columns and beams and in the thickness of slabs and walls:

	Minus	1/4 in.
	Plus	1/2 in.
f.	Footings*	
	i. Variations in dimensions in plan:	
	Minus	1/2 in.
	Plus	2 in.
	ii. Misplacement or eccentricity	
	2 percent of the footing width in the direction	
	of misplacement but not more than	2 in.
	iii. Thickness:	
	Decrease in specified thickness	5 percent
	Increase in specific thickness	No limit
g.	Variation in steps:	
	i. In a flight of stairs:	
	Rise	±1/8 in.
	Tread	±1/4 in.
	ii. In consecutive steps:	
	Rise	±1/16 in.
	Tread	±1/8 in.

*\*Tolerances apply to concrete dimensions only, not to positioning of vertical reinforcing steel, dowels, or embedded items.*

### 3.08 FORM REMOVAL

- A. Remove top forms on sloping surfaces of concrete as soon as removal operations will not allow the concrete to sag. Perform any needed repairs or treatments required on sloping surfaces at once, and follow immediately with the specified curing.
- B. The CONTRACTOR shall be responsible for the removal of forms and shores. Forms or shores shall not be removed before test cylinders have reached 75% of the specified minimum 28 day compressive strength for the class of concrete specified in Section 03300 entitled "Cast-in-Place Concrete", nor sooner than listed below:
- |    |   |         |
|----|---|---------|
| 1. | Foundation slab and grade beam side forms   | 3 days  |
| 2. | Wall forms                                  | 3 days  |
| 3. | Column forms                                | 3 days  |
| 4. | Beam and girder side forms                  | 3 days  |
| 5. | Overhead beam bottoms and slab forms/shores | 14 days |

### 3.09 MAINTENANCE OF FORMS

- A. Forms shall be maintained at all times in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Forms, when in place, shall conform to the established alignment and grades. Before concrete is placed, the forms shall be thoroughly cleaned. The form surfaces shall be treated with a nonstaining mineral oil or other lubricant acceptable to the ENGINEER. Any excess lubricant shall be satisfactorily removed before placing the concrete. Where field oiling of forms is required, the CONTRACTOR shall perform the oiling at least two weeks in advance of their use. Care shall be exercised to keep oil off the surfaces of steel reinforcement and other metal items to be embedded in concrete.

- END OF SECTION -

## SECTION 03200 - CONCRETE REINFORCEMENT

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish, fabricate and place all concrete reinforcing steel, welded wire fabric, couplers, and concrete inserts for use in reinforced concrete and shall perform all appurtenant work, including all the wires, clips, supports, chairs, spacers, and other accessories, all in accordance with the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals.
- B. Section 03100 - Concrete Formwork.
- C. Section 03300 - Cast-in-Place Concrete.
- D. Section 03315 – Grout.

#### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these specifications, all Work specified herein shall conform to or exceed the requirements of the Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.

##### 1. Codes and Standards

- a. The Building Code, as referenced herein, is the Florida Building Code (FBC).

##### 2. Commercial Standards

- a. ACI 315          Details and Detailing of Concrete Reinforcement.
- b. CRSI            Concrete Reinforcing Steel Institute Manual of Standard Practice.
- c. ACI 305          Hot Weather Concreting.
- d. ACI 318          Building Code Requirements for Structural Concrete.
- e. ACI 350          Code Requirements for IWEnvironmental Engineering Concrete Structures.
- f. WRI              Manual of Standard Practice for Welded Wire Fabric.

- h. ASTM A 185 Specification for Welded Steel Wire Fabric for Concrete Reinforcement.
- i. ASTM A 615 Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

#### 1.04 SUBMITTALS

- A. The CONTRACTOR shall furnish shop bending diagrams, placing lists, and Drawings of all reinforcing steel prior to fabrication in accordance with the requirements of the Section 01300 entitled, "Submittals." The CONTRACTOR shall submit detailed placing and shop fabricating drawings, prepared in accordance with ACI 315 and ACI Detailing Manual - (SP66) for all reinforcing steel. These drawings shall be made to such a scale as to clearly show joint locations, openings, the arrangement, spacing and splicing of the bars. Where opening sizes are dependent on equipment selection the CONTRACTOR shall indicate all necessary dimensions to define steel lengths and placing details.
- B. Details of the concrete reinforcing steel and concrete inserts shall be submitted by the CONTRACTOR at the earliest possible date after receipt by the CONTRACTOR of the Notice to Proceed. Details of reinforcing steel for fabrication and erection shall conform to ACI 315 and the requirements specified and shown. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop Drawings shall include bar placement diagrams which clearly indicate the dimensions of each bar splice.
- C. Where mechanical couplers are shown on the Drawings to be used to splice reinforcing steel, the CONTRACTOR shall submit manufacturer's literature which contains instructions and recommendations for installation for each type of coupler used; certified test reports which verify the load capacity of each type and size of coupler used; and shop Drawings which show the location of each coupler with details of how they are to be installed in the formwork.
- D. Mill test certificates.
- E. Requests to relocate any bars that cause interferences or that cause placing tolerances to be violated.
- F. Proposed supports for each type of reinforcing.
- G. International Code Council – Evaluation Services Evaluation Services Report (ICC-ES ESR) for dowel adhesives.

#### 1.05 QUALITY ASSURANCE

- A. Installer Qualifications for Drilled-In Rebar: Drilled-in rebar shall be installed by an installer with at least three years of experience performing similar installations.

## PART 2 -- PRODUCTS

### 2.01 REINFORCEMENT

- A. All reinforcing steel for all reinforced concrete construction shall conform to the following requirements:
  - 1. Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement. All reinforcing steel shall have the manufacturer's mill marking rolled into the bar which shall indicate the producer, size, type and grade. All reinforcing bars shall be deformed bars. Smooth reinforcing bars shall not be used unless specifically called for on the Drawings.
  - 2. Welded wire fabric reinforcement shall conform to the requirements of ASTM A 1064 and the details shown on the Drawings. Welded wire fabric with longitudinal wire larger than W9.5 size shall be furnished in flat sheets only. All welded wire fabric reinforcement shall be galvanized.
- B. Field welding of reinforcing steel will not be allowed.
- C. Use of coiled reinforcing will not be allowed.

### 2.02 ACCESSORY MATERIALS

- A. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers and other devices to position reinforcing during concrete placement. Wire bar supports shall be plastic protected (CRSI Class 1).
- B. Tie Wire: Galvanized 16 gauge annealed type.
- C. Concrete blocks (dobies), used to support and position reinforcing steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Concrete blocks shall only be used bottom mat of reinforcing steel for slabs on grade.

### 2.03 MECHANICAL COUPLERS

- A. Mechanical couplers shall develop a tensile strength which exceeds 100 percent of the ultimate tensile strength and 125 percent of the yield strength of the reinforcing bars being spliced. The reinforcing steel and coupler used shall be compatible for obtaining the required strength of the connection.
- B. Where the type of coupler used is composed of more than one component, all components required for a complete splice shall be supplied.
- C. Hot forged sleeve type couplers shall not be used. Acceptable mechanical couplers are Dayton Superior Dowel Bar Splicer System by Dayton Superior, Dayton, Ohio, or approved equal. Mechanical couplers shall only be used where shown on the Drawings or where specifically approved by the ENGINEER.

- D. Where the threaded rebar to be inserted into the coupler reduces the diameter of the bar, the threaded rebar piece shall be provided by the coupler manufacturer.

#### 2.04 DOWEL ADHESIVE SYSTEM

- A. Where shown on the Drawings, reinforcing bars anchored into hardened concrete with a dowel adhesive system shall use a two-component adhesive mix which shall be injected with a static mixing nozzle following manufacturer's instructions.
- B. All holes shall be drilled in accordance with the manufacturer's instructions except that core drilled holes shall not be permitted unless specifically allowed by the ENGINEER. Cored holes, if allowed by the manufacturer and approved by the ENGINEER, shall be roughened in accordance with manufacturer's requirements.
- C. Thoroughly clean drill holes of all debris, drill dust, and water in accordance with manufacturer's instructions prior to installation of adhesive and reinforcing bar.
- D. Degree of hole dampness shall be in strict accordance with manufacturer recommendations. Installation conditions shall be either dry or water-saturated. Water filled or submerged holes shall not be permitted unless specifically approved by the ENGINEER.
- E. Injection of adhesive into the hole shall be performed in a manner to minimize the formation of air pockets in accordance with the manufacturer's instructions.
- F. Embedment Depth:
  - 1. The embedment depth of the bar shall be as show on the Drawings. Although all manufacturers listed below are permitted, the embedment depth shown on the Drawings is based on "SET-XP" by Simpson Strong-Tie Co. If the Contractor submits one of the other named dowel adhesives from the list below, the ENGINEER shall evaluate the required embedment and the Contractor shall provide the required embedment depth stipulated by the ENGINEER specific to the approved dowel adhesive.
  - 2. Where the embedment depth is not shown on the Drawings, the embedment depth shall be determined to provide the minimum allowable bond strength equal to the tensile strength of the rebar according to the manufacturer's ICC-ES ESR.
  - 3. The embedment depth shall be determined using the actual concrete compressive strength, a cracked concrete state, maximum long term temperature of 110 degrees F, and maximum short term temperature of 140 degrees F. In no case shall the embedment depth be less than the minimum, or more than the maximum, embedment depths stated in the manufacturer's ICC-ES ESR.
- G. ENGINEER's approval is required for use of this system in locations other than those shown on the Drawings.
- H. The adhesive system shall be IBC compliant for use in both cracked and uncracked concrete, must comply with the latest revision of ICC-ES Acceptance Criteria AC308, and shall have a valid ICC-ES report. The adhesive system shall be "Epcon System C6+ Adhesive Anchoring System" as manufactured by ITW Redhead, " HIT-HY 200 Injection

Adhesive Anchor System" as manufactured by Hilti, Inc. "SET-XP" as manufactured by Simpson Strong-Tie Co. or "Pure 110+ Epoxy Adhesive Anchor System" by DeWalt. Fast-set epoxy formulations shall not be acceptable.

- I. All individuals installing dowel adhesive system shall be certified as an Adhesive Anchor Installer in accordance with the ACI-CRSI Anchor Installation Certification Program.

### PART 3 -- EXECUTION

#### 3.01 FABRICATION

- A. Reinforcing steel shall be accurately formed to the dimensions and shapes shown on the Drawings, and the fabricating details shall be prepared in accordance with ACI 315 and ACI 318, except as modified by the Drawings. Stirrups and tie bars shall be bent around a pin having a diameter not less than 1-1/2 inch for No. 3 bars, 2-inch for No. 4 bars, and 2-1/2 inch for No. 5 bars. Bends for other bars shall be made around a pin having a diameter not less than 6 times the minimum thickness, except for bars larger than 1 inch, in which case the bends shall be made around a pin of 8 bar diameters. Bars shall be bent cold.
- B. The CONTRACTOR shall fabricate reinforcing bars for structures in accordance with bending diagrams, placing lists, and placing Drawings. Drawings, diagrams, and lists shall be prepared by the CONTRACTOR as specified under Section entitled "Submittals," herein.
- C. Fabricating Tolerances: Bars used for concrete reinforcing shall meet the following requirements for fabricating tolerances:
  1. Sheared length: + 1 inch.
  2. Depth of truss bars: + 0, - 1/2 inch.
  3. Stirrups and ties: + 1/2 inch.
  4. All other bends: + 1 inch.
- D. No fabrication shall commence until approval of Shop Drawings has been obtained and all bars shall be shop fabricated unless approved by the ENGINEER to be bent in the field. Bars shall not be straightened or rebent in a manner that will injure the material. Heating of any bars will not be permitted.

#### 3.02 TEMPERATURE REINFORCING

- A. Unless otherwise shown on the Drawings or in the absence of the concrete reinforcing being shown, the minimum cross sectional area of horizontal and vertical concrete reinforcing in walls shall be 0.0033 times the gross concrete area and the minimum cross sectional area of reinforcing perpendicular to the principal reinforcing in slabs shall be 0.0020 times the gross concrete area. Temperature reinforcing shall not be spaced further apart than five times the slab or wall thickness, nor more than 18 inches.

### 3.03 DELIVERY, STORAGE AND HANDLING

- A. All reinforcing shall be neatly bundled and tagged for placement when delivered to the job site. Bundles shall be properly identified for coordination with mill test reports.
- B. Reinforcing steel shall be stored above ground on platforms or other supports and shall be protected from the weather at all times by suitable covering. It shall be stored in an orderly manner and plainly marked to facilitate identification.
- C. Reinforcing steel shall at all times be protected from conditions conducive to corrosion until concrete is placed around it.
- D. The surfaces of all reinforcing steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcing shall be reinspected and if necessary recleaned.

### 3.04 PLACEMENT

- A. Reinforcing steel shall be accurately positioned as shown on the Drawings, and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcing steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcing steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcing steel shall be tied to the steel with wire ties which are embedded in the blocks. For concrete over formwork, the CONTRACTOR shall furnish concrete, metal, plastic, or other acceptable bar chairs and spacers.
- B. The portions of all accessories in contact with the formwork shall be made of plastic or steel coated with a 1/8 inch minimum thickness of plastic which extends at least 1/2 inch from the concrete surface. Plastic shall be gray in color.
- C. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
- D. Bars additional to those shown on the Drawings which may be found necessary or desirable by the CONTRACTOR for the purpose of securing reinforcement in position shall be provided by the CONTRACTOR at its own expense.
- E. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the Building Code.
- F. Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits, or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be as acceptable to the ENGINEER. Reinforcing bars shall not be cut to place electrical plumbing or mechanical

conduits, piping, ducts, etc. without the expressed written approval of the Engineer of Record.

- G. Welded wire fabric reinforcement placed over horizontal forms shall be supported on slab bolsters having gray, plastic-coated standard type legs as specified in Paragraph B herein. Slab bolsters shall be spaced not less than 30 inches on centers, shall extend continuously across the entire width of the reinforcing mat, and shall support the reinforcing mat in the plane shown on the Drawings.
- H. Welded wire fabric placed over the ground shall be supported on wired concrete blocks (dobies) spaced not more than 3 feet on centers in any direction. The construction practice of placing welded wire fabric on the ground and hooking into place in the freshly placed concrete shall not be used.
- I. The clear distance between parallel bars (except in columns and between multiple layers of bars in beams) shall be not less than the nominal diameter of the bars nor less than 1-1/3 times the maximum size of the coarse aggregate, nor less than one inch.
- J. Where reinforcement in beams or girders is placed in 2 or more layers, the clear distance between layers shall be not less than one inch.
- K. Reinforcing bar splices shall only be used at locations shown on the Drawings. When it is necessary to splice reinforcement at points other than where shown, the character of the splice shall be as acceptable to the Engineer.
- L. The length of lap for reinforcing bars, unless otherwise shown on the Drawings shall be in accordance with ACI 318, Section 12.15.1 for a class B splice.
- M. Laps of welded wire fabric shall be in accordance with the ACI 318. Adjoining sheets shall be securely tied together with No. 14 tie wire, one tie for each 2 running feet. Wires shall be staggered and tied in such a manner that they cannot slip.
- N. Couplers which are located at a joint face shall be a type which can be set either flush or recessed from the face as shown on the Drawings. The couplers shall be sealed during concrete placement to completely eliminate concrete or cement paste from entering. After the concrete is placed, couplers intended for future connections shall be plugged and sealed to prevent any contact with water or other corrosive materials. Threaded couplers shall be plugged with plastic plugs which have an O-ring seal.
- O. Reinforcing shall not be straightened or rebent in a manner which will injure the material. Bars with kinks or bends not shown on the Drawings shall not be used. All bars shall be bent cold, unless otherwise permitted by the Engineer. No bars partially embedded in concrete shall be field-bent except as shown on the Drawings or specifically permitted by the Engineer.
- P. Dowel Adhesive System shall be installed in strict conformance with the manufacturer's recommendations and as required in Article 2.04 above. A representative of the manufacturer must be on site prior to adhesive dowel installation to provide instruction on proper installation procedures for all adhesive dowel installers. Testing of adhesive dowels shall be as indicated below. If the dowels have a hook at the end to be embedded in subsequent work, an approved mechanical coupler shall be provided at a convenient

distance from the face of existing concrete to facilitate adhesive dowel testing while maintaining required hook embedment in subsequent work.

- Q. All adhesive dowel installations in the horizontal or overhead orientation shall be conducted by a certified Adhesive Anchor Installer as certified by ACI/CRSI per ACI 318-11 9.2.2. Current AAI Certificates must be submitted to the Engineer of Record for approval prior to commencement of any adhesive anchor installations.

### 3.05 SPLICING

- A. Reinforcing bar splices shall only be used at locations shown on the Drawings. When it is necessary to splice reinforcing at points other than where shown, the splice shall be as acceptable to the ENGINEER.
- B. The length of lap for reinforcing bars, unless otherwise shown on the Drawings shall be in accordance with ACI 318 for a class B splice.
- C. Laps of welded wire fabric shall be in accordance with ACI 318. Adjoining sheets shall be securely tied together with No. 14 tie wire, one tie for each 2 running feet. Wires shall be staggered and tied in such a manner that they cannot slip.
- D. Mechanical splices shall be used only where shown on the drawings or when approved by the ENGINEER.
- E. Couplers which are located at a joint face shall be a type which can be set either flush or recessed from the face as shown on the Drawings. The couplers shall be sealed during concrete placement to completely eliminate concrete or cement paste from entering. After the concrete is placed, couplers intended for future connections shall be plugged and sealed to prevent any contact with water or other corrosive materials. Threaded couplers shall be plugged with plastic plugs which have an O-ring seal.

### 3.06 CLEANING AND PROTECTION

- A. Reinforcing steel shall at all times be protected from conditions conducive to corrosion until concrete is placed around it.
- B. The surfaces of all reinforcing steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcing shall be reinspected and, if necessary recleaned.

### 3.07 INSPECTION

- A. The CONTRACTOR shall advise the ENGINEER of their intentions to place concrete and shall allow the ENGINEER adequate time to inspect all reinforcing steel before concrete is placed.
- B. The CONTRACTOR shall advise the ENGINEER of their intentions to place grout in masonry walls and shall allow the ENGINEER adequate time to inspect all reinforcing steel before grout is placed.

## SECTION 03300 - CAST-IN-PLACE CONCRETE

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials for concrete in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, all in accordance with the requirements of the Contract Documents.
- B. The requirements in this section shall apply to the following types of concrete:
  - 1. Class A Concrete: Normal weight concrete used at all locations, unless otherwise noted.
  - 2. Class B Concrete: Normal weight concrete with 3/8" maximum aggregate. Class B concrete shall be used at locations indicated on the Drawings, specified herein, or approved by the ENGINEER.
  - 3. Class C Concrete: Normal weight concrete used in electrical/instrumentation ductbanks, pipe encasements and sidewalks.
  - 4. Flowable fill: Lean concrete proportioned without the use of coarse aggregate primarily for use as pipe backfill. Flowable fill shall be utilized only at locations indicated on the Drawings.
  - 5. Tremie concrete: Concrete indicated to be placed underwater.
  - 6. Grout is specified in Section 03315 entitled "Grout".

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals.
- B. Section 01400 - Quality Control.
- C. Section 03100 - Concrete Formwork.
- D. Section 03200 - Concrete Reinforcement.
- E. Section 03400 - Precast Concrete, General.
- F. Section 03315 – Grout.
- G. Section 05050 - Metal Fastening.

### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Florida Building Code (FBC) and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.
- B. Codes and Standards
  - 1. The Building Code, as referenced herein, shall be the Florida Building Code.
- C. Federal Specifications
  - 1. UU-B-790A (Int.Amd. 1) Building Paper, Vegetable Fiber (Kraft, Waterproofed, Water Repellant and Fire Resistant).
- D. Commercial Standards
  - 1. ACI 214 Recommended Practice for Evaluation of Strength Test Results of Concrete.
  - 2. ACI 301 Specifications for Structural Concrete for Buildings.
  - 3. ACI 305 Hot Weather Concreting.
  - 4. ACI 306 Cold Weather Concreting.
  - 5. ACI 309 Recommended Practice for Consolidation of Concrete.
  - 6. ACI 315 Details and Detailing of Concrete Reinforcement.
  - 7. ACI 318 Building Code Requirements for Structural Concrete.
  - 8. ACI 347 Recommended Practice for Concrete Formwork.
  - 9. ACI 350 Environmental Engineering Concrete Structures.
  - 10. ASTM C 31 Methods of Making and Curing Concrete Test Specimens in the Field.
  - 11. ASTM C 33 Specification for Concrete Aggregates.
  - 12. ASTM C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  - 13. ASTM C 88 Test Method for Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate.
  - 14. ASTM C 94 Specification for Ready-Mixed Concrete.
  - 15. ASTM C 114 Method for Chemical Analysis of Hydraulic Cement.
  - 16. ASTM C 136 Method for Sieve Analysis of Fine and Coarse Aggregate.

17. ASTM C 143 Test Method for Slump of Portland Cement Concrete.
18. ASTM C 150 Specification for Portland Cement.
19. ASTM C 156 Test Method for Water Retention by concrete Curing Materials.
20. ASTM C 157 Test Method for length Change of Hardened Cement Mortar and Concrete.
21. ASTM C 172 Standard Test Method of Sampling Fresh Concrete.
22. ASTM C 192 Method of Making and Curing concrete Test Specimens in the Laboratory.
23. ASTM C 227 Standard Test Method for Potential Alkali Reactivity of Cement Aggregate Combinations (Mortar-Bar Method).
24. ASTM C 260 Specification for Air-Entraining Admixtures for Concrete.
25. ASTM C 289 Standard Test Method for Potential Reactivity of Aggregates (Chemical Method).
26. ASTM C 494 Specification for Chemical Admixtures For Concrete.
27. ASTM C 586 Standard Test Method for Potential Alkali Reactivity of Carbonate Rocks for Concrete Aggregates (Rock Cylinder Method).
28. ASTM C 618 Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for use as a Mineral Admixture in Portland Cement Concrete.
29. ASTM C 1077 Recommended Practice for labs Testing Concrete.
30. ASTM D 1751 Specification for preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
31. ASTM D 6103 Standard Test Method for Flow Consistency of Controlled Low Strength Material.
32. ASTM E11 Specification for Wire-Cloth Sieves for Testing Purposes.
33. ASTM E 119 Method for Fire Tests of Building Construction and Materials.

#### 1.04 SUBMITTALS

- A. The design mixes to be used shall be prepared by qualified persons and submitted for review. The design of the mix is the responsibility of the CONTRACTOR subject to the limitations of the specifications. Review processing of this submission will be required only as evidence the mix has been designed by qualified persons and that the minimum requirements of the specifications have been met. Such review will in no way alter the responsibility of the CONTRACTOR to furnish concrete meeting the requirements of the specifications. If in the progress of the work the sources of materials change in

characteristics or the CONTRACTOR requests a new source in writing, the CONTRACTOR shall, at the CONTRACTOR expense submit new test data and information for the establishment of a new design mix. Submit mix designs for all classes of concrete. Mix design submittals shall include the following:

1. Sources of all materials and certifications of compliance with specifications for all sources of each material.
  2. Certified current (less than one year old) chemical analysis of Portland Cement or Blended Cement to be used.
  3. Certified current (less than one year old) chemical analysis of fly ash to be used.
  4. Aggregate test results showing compliance with required standards, i.e. sieve analysis, aggregate soundness tests, etc.
  5. Manufacturer's data on all admixtures stating compliance with required standards and are compatible with one another.
  6. Field experience records and/or trial mix data for the proposed concrete mixes.
- B. Where ready-mix concrete is used, the CONTRACTOR shall provide delivery tickets at the time of delivery of each load of concrete. In addition to the information required by ASTM C94, each ticket shall show the mix number, cement content, water/cementitious materials ratio, and amount of water allowed to be added to truck without exceeding required water/cementitious materials ratio.
- C. A schedule of all concrete placement with volume of concrete planned to be placed each day.
- D. A layout of all structures with all planned construction joint locations.
- 1.05 QUALITY ASSURANCE
- A. Plant equipment and facilities shall meet all requirements of the Check List for Certification of Ready Mixed Concrete Production facilities of the National Ready Mixed Concrete Association and ASTM C 94.
- B. Tests for compressive strength and slump of concrete will be performed as specified herein. Test for determining slump will be in accordance with the requirements of ASTM C 143.
- C. The cost of initial trial mixes and initial laboratory tests to design the mixes including compression tests, sieve analysis, and tests on trial mixes shall be included in the Contract Price.
- D. The cost of all tests during construction will be borne by the CITY. However, the CONTRACTOR shall be charged for the cost of any additional tests and investigation on work performed which does not meet the Specifications. All test results shall be sent directly to the ENGINEER. All testing invoices shall be sent directly to the CITY. The CONTRACTOR shall be responsible for coordination of all tests with the testing laboratory.

E. Concrete for testing shall be supplied by the CONTRACTOR at no cost to the CITY, and the CONTRACTOR shall provide assistance to the ENGINEER in obtaining samples. The CONTRACTOR shall dispose of and clean up all excess material.

F. Construction Tolerances

1. The CONTRACTOR shall set and maintain concrete forms and perform finishing operations to ensure that the completed work is within the tolerances specified herein. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in the Specifications, permissible deviations will be in accordance with ACI 347 and Section 03100 entitled "Concrete Formwork".

1.06 QUALITY CONTROL

A. Compressive Strength

1. Compression test specimens shall be taken during construction from the first placement of each class of concrete specified herein and at intervals thereafter as selected by the ENGINEER to insure continued compliance with these Specifications. At least one set of test specimens shall be made for each placement in excess of five cubic yards, or for each fifty (50) cubic yards of concrete placed, or for each 5000 square feet of surface area for slabs or walls, whichever is greater.
2. Samples of freshly mixed concrete shall be obtained in accordance with ASTM C 172, and compression test specimens for concrete shall be made in accordance with ASTM C 31. Specimens shall consist of at least five 6-inch diameter by 12-inch high cylinders, or eight 4-inch diameter by 8-inch high cylinders. Each cylinder shall be identified by a tag attached to the side of the cylinder.
3. The CONTRACTOR shall provide approved curing boxes for storage of cylinders on site. The insulated curing box shall be of sufficient size and strength to contain all the specimens made in any four consecutive working days and to protect the specimens from falling over, being jarred or otherwise disturbed during the period of initial curing. The box shall be erected, furnished and maintained by the CONTRACTOR. Such box shall be equipped to provide the moisture and to regulate the temperature necessary to maintain the proper curing conditions required by ASTM C31. Such box shall be located in an area free from vibration such as pile driving and traffic of all kinds. No concrete requiring inspection shall be delivered to the site until such storage curing box has been provided. Specimens shall remain undisturbed in the curing box until ready for delivery to the testing laboratory but not less than sixteen hours.
4. Compression tests shall be performed in accordance with ASTM C 39. For 6-inch x 12-inch cylinders, two test cylinders will be tested at 7 days and 2 at 28 days. For 4-inch x 8-inch cylinders, three test cylinders will be tested at 7 days and three at 28 days. The remaining cylinders will be held to verify test results, if needed.

B. Consistency

1. Consistency of the concrete will be checked by the ENGINEER by standard slump cone tests. The CONTRACTOR shall make any necessary adjustments in the mix as the ENGINEER may direct and shall upon written order suspend all placing operations in the event the consistency does not meet the intent of the specifications. No payment shall be made for delays, material or labor costs due to such eventualities.
2. Slump tests shall be made in accordance with ASTM C 143. Slump tests shall be performed as deemed necessary by the ENGINEER and each time compressive strength samples are taken.

C. Air Content

1. Samples of freshly mixed concrete will be tested for entrained air content by the ENGINEER in accordance with ASTM C 231.
2. Air content tests will be performed as deemed necessary by the ENGINEER and each time compressive strength samples are taken.

D. Evaluation and Acceptance of Concrete

1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 214 and ACI 318, Chapter 5 "Concrete Quality Mixing and Placing", and as specified herein.
2. If any concrete fails to meet these requirements, immediate corrective action shall be taken to increase the compressive strength for all subsequent batches of the type of concrete affected.
3. All concrete which fails to meet the ACI requirements and these specifications, is subject to removal and replacement at the cost of the CONTRACTOR. Additional testing may also be required to verify compressive strength of concrete. Additional testing shall involve extraction and testing of concrete cores in accordance with ASTM C 42. ENGINEER shall determine locations where concrete cores shall be taken. Nondestructive test methods shall not be used to verify strength of in-place concrete.

## PART 2 --PRODUCTS

### 2.01 CONCRETE MATERIALS

- A. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.
- B. All materials furnished and stored for the work shall comply with the requirements of ACI 301, as applicable.

C. Materials for concrete shall conform to the following requirements:

1. Cement shall be standard brand Portland cement conforming to ASTM C 150 for Type II. Portland cement shall contain not more than 0.60 percent alkalis. The term "alkalis" referred to herein is defined as the sum of the percentage of sodium oxide and 0.658 times the percentage of potassium oxide ( $\text{Na}_2\text{O} + 0.658 \text{K}_2\text{O}$ ). These oxides shall be determined in accordance with ASTM C 114. A single brand of cement shall be used throughout the Work, and prior to its use, the brand shall be acceptable to the ENGINEER. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Sacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test reports for each shipment of cement to be used shall be submitted to the ENGINEER if requested regarding compliance with these Specifications. The proposed Portland cement shall not contain more than 8% tricalcium aluminate and more than 12% tetracalcium aluminoferrite.
2. Fly ash shall meet the requirements of ASTM C 618 for Class F, except the loss on ignition shall not exceed 4%. The fly ash constituent shall be maximum 15% of the total weight of the combine Portland cement and fly ash. The percentage of fly ash shall be set such that the mean mortar bar expansion shall be 0.08% or less when tested in accordance with ASTM C 1567. The Portland cement and aggregates used in the mix for this test shall be the Portland cement and aggregates submitted for use on the job. For concrete to be used in environmental concrete structures, i.e. process structures or fluid containing structures, inclusion of fly ash in concrete mix is mandatory.
3. Water shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts and other impurities. The water shall be considered potable, for the purposes of this Section only, if it meets the requirements of the local governmental agencies.
4. Aggregates shall be obtained from pits acceptable to the ENGINEER, shall be non-reactive, and shall conform to the FBC and ASTM C 33. Maximum size of coarse aggregate shall be as specified in Article 2.04, Paragraph B of this Section. Lightweight sand for fine aggregate will not be permitted.
  - a. CONTRACTOR shall submit a new trial mix to the ENGINEER for approval whenever a different aggregate or gradation is proposed.
  - b. Coarse aggregates shall consist of clean, hard, durable gravel, crushed gravel, crushed rock or a combination thereof. The coarse aggregates shall be prepared and handled in two or more size groups for combined aggregates with a maximum size not greater than 1 inch. When the aggregates are proportioned for each batch of concrete the two size groups shall be combined.
  - c. Fine aggregates shall be natural or manufactured sand, clean and free from deleterious substances, that is hard and durable.
  - d. Combined aggregates shall be well graded from coarse to fine sizes, and shall be uniformly graded between screen sizes to produce a concrete that

has optimum workability and consolidation characteristics. Where a trial batch is required for a mix design, the final combined aggregate gradations will be established during the trial batch process.

- e. When tested in accordance with "Organic Impurities in Sands for Concrete" (ASTM C 40), the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.
- f. When tested in accordance with "Resistance to Abrasion of Small size Coarse Aggregate by Use of the Los Angeles Machine" (ASTM C 131), the coarse aggregate shall show a loss not exceeding 42 percent after 500 revolutions, or 10.5 percent after 100 revolutions.
- g. When tested in accordance with "Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate" (ASTM C 88), the loss resulting after five cycles shall not exceed 10 percent for fine or coarse aggregate when using sodium sulfate.

## 2.02 ADMIXTURES

- A. Air-entraining agent meeting the requirements of ASTM C 260, shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3 to 5 percent. Air-entraining agent shall be Sika AER by Sika Corp., MB-VR by BASF, Darex AEA by Grace, AEA-92S by Euclid Chemical Company, or equal.
- B. Admixtures shall be required at the ENGINEER'S discretion or, if not required, may be added at the CONTRACTOR'S option to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the CONTRACTOR'S expense. The use of an admixture shall be subject to acceptance by the ENGINEER. Concrete containing an admixture shall be first placed at a location determined by the ENGINEER. If the use of an admixture is producing an inferior end result, the CONTRACTOR shall discontinue use of the admixture. Admixtures specified herein shall conform to the requirements of ASTM C 494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used. Admixtures shall contain no free chloride ions, be non-toxic after 30 days, and shall be compatible with and made by the same manufacturer as the air entraining admixture.
  - 1. Set controlling admixture shall be either with or without water-reducing properties. Where the air temperature at the time of placement is expected to be consistently over 80 degrees Fahrenheit, a set retarding admixture such as Sika Chemical Corporation's Plastiment, Pozzolith 200N by BASF, or equal shall be used. Where the air temperature at the time of placement is expected to be consistently under 40 degrees Fahrenheit, a non-chloride, non-corrosive set accelerating admixture such as Sika Chemical Corporation's Plastocrete 161FL, Pozzolith NC534 by BASF, or equal shall be used.
  - 2. Low range water reducer shall be added to all structural concrete, and shall conform to ASTM C 494, Type A. It shall be either a hydroxylated carboxylic acid type or a dydroxylated polymer type. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer's instructions and recommendations.

3. Water reducing and retarding admixture shall be in conformance with ASTM C 494 Type D free of chlorides, "Pozzolith 200N" by BASF, "WRDA-64" by Grace or equal.
4. High range water reducer shall be sulfonated polymer conforming to ASTM C 494, Type F or G. The use of high range water reducer is mandatory for Class A2 concrete. The high range water reducer shall be accurately measured and pressure injected into the mixer as a single dose by an experienced technician. A standby system shall be provided and tested prior to each day's operation of the job site system. Concrete shall be mixed at mixing speed for a minimum of 100 mixer revolutions after the addition of the high range water reducer. Acceptable products are "Eucon 37" or Plastol 5000 by the Euclid Chemical Company, "Rheobuild 1000 or Glenium Series" by BASF, and "Daracem 100 or Advaflo Series" by W.R. Grace or equal.
5. The CONTRACTOR shall submit certification from each admixture manufacturer that all admixtures utilized in the design mix are compatible with one another and properly proportioned.
6. Prohibited Admixtures: Calcium chloride, thiocyanate or admixtures containing more than 0.05 percent chloride ions are not permitted.
7. Certification: Written conformance to the above mentioned requirements and the chloride ion content of the admixture will be required from the admixture manufacturer prior to Mix design review by the ENGINEER.

## 2.03 ACCESSORIES

- A. Epoxy adhesives shall be the following products for the applications specified to be used in strict accordance with manufacturer's recommendations.
  1. For bonding freshly-mixed, plastic concrete to hardened concrete, Sikadur 32 Hi-Mod, LPL Epoxy Adhesive, as manufactured by Sika Chemical Corporation; Concsive 1001-LPL, as manufactured by Adhesive Engineering Company; or equal.
  2. For bonding hardened concrete or masonry to steel, Colma-Dur Gel, Sikadur Hi-Mod Gel, or equal.

## 2.04 CONCRETE MIX

- A. Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. The exact proportions in which these materials shall be based on the results of field experience or laboratory trial mixes in conformance with Section 5.3 "Proportioning on the Basis of Field Experience and/or Laboratory Trial Mixtures" of ACI 318. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required results at no

additional cost to the CITY. All changes shall be subject to review by the ENGINEER.

B. The proportions of cement, aggregates, admixtures and water used in the concrete shall be based on tests of grading and moisture content of materials, slump of concrete mixture, strength of concrete and the following factors:

1. Class A Concrete (All cast-in-place and precast concrete unless otherwise noted).

Minimum cementitious materials content, per cubic yard	without flyash added: 611 lbs.
Maximum water-cementitious materials ratio, by weight	0.45
Slump range	3 inches to 4 inches with water reducing admixture 3-inch maximum before addition of high range water reducing admixture. 8-inch maximum after addition of high range water reducing admixture
Coarse Aggregate	#57 per ASTM C33
Compressive strength at 28 days – F'c	4,000 psi
Air Content	3% ± 1%

2. Class B Concrete (At locations indicated on the Drawings or approved by the ENGINEER).

Minimum cementitious materials content, per cubic yard	611 lbs.
Maximum water-cementitious materials ratio, by weight	0.45
Slump, maximum	6 inches
Compressive strength at 28 days - F'c	4,000 psi
Coarse Aggregate	Size #8 in accordance with ASTM C33
Air Content	3% ± 1%

3. Class C Concrete (Sidewalks, pipe encasements in the dry, thrust blocks and electrical duct banks)

Minimum cementitious materials content, per cubic yard	500 lbs.
Maximum water-cementitious materials ratio, by weight	0.50

Slump, maximum	5 inches
Compressive strength at 28 days - F'c	3,000 psi
Coarse Aggregate	#57 per ASTM C33
Air Content	3% ± 1%

4. Flowable Fill (In lieu of pipe bedding, select backfill)

Minimum cementitious materials content, per cubic yard	100 lbs.
Maximum water-cementitious materials ratio, by weight	5.0
Flowability, minimum	8 inches
Compressive strength at 28 days - F'c	50-150 psi
Coarse aggregate	none
Fine aggregate	limestone screenings

C. All Class A concrete, unless noted otherwise on the Drawings, shall be air entrained concrete. A water reducing admixture may be added to the mix at the CONTRACTOR'S option.

D. The mix proportions used shall be changed subject to the limitation specified herein, whenever such change is necessary or desirable to secure the required strength, density, workability, and surface finish and the CONTRACTOR shall be entitled to no additional compensation because of such changes.

2.05 CONSISTENCY

A. The quantity of water entering into a batch of concrete shall be just sufficient, with a normal mixing period, to produce a concrete which can be worked properly into place without segregation, and which can be compacted by the vibratory methods herein specified to give the desired density, impermeability and smoothness of surface. The quantity of water shall be changed as necessary, with variations in the nature or moisture content of the aggregates, to maintain uniform production of a desired consistency. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C 143.

2.06 READY-MIXED CONCRETE

A. Ready-mixed concrete shall be used meeting the requirements as to materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C 94.

- B. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within one and one-half hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. Upon delivery from the truck concrete temperature shall not exceed 90 degrees Fahrenheit.
- C. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type. The counters shall be actuated at the time of starting mixers at mixing speeds.
- D. Each batch of concrete shall be mixed in a truck mixer for not less than 70 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.

### PART 3 -- EXECUTION

#### 3.01 PROPORTIONING AND MIXING

- A. Proportioning of the concrete mix shall be based on the results of field experience or laboratory trial mixes in conformance with Section 5.3, "Proportioning on the Basis of Field Experience and/or Trial Mixtures" of ACI 318. When trial mixes are used they shall conform to the requirements of Chapter 3 "Proportioning" of ACI 301; provided, that the maximum slump for any concrete shall not exceed the limits specified in this Section of the Specifications.
- B. When field experience records are inadequate to confirm the quality of a proposed concrete mix in accordance with Section 5.3, "Proportioning on the Basis of Field Experience and/or Trial Mixtures" of ACI 318, or when required by the ENGINEER, an independent testing laboratory designated by the CONTRACTOR and acceptable to the ENGINEER shall test a trial batch of each of the preliminary concrete mixes submitted by the CONTRACTOR. The trial batches shall be prepared using the aggregates, cement and admixtures proposed for the project. The trial batch materials shall be of a quantity such that the testing laboratory can obtain enough samples to satisfy requirements stated below. Tests on individual materials stated in PART 2 -- PRODUCTS should already be performed before any trial mix is done. The cost of laboratory trial batch tests for each specified concrete mix will be borne by the CONTRACTOR and the CONTRACTOR shall furnish and deliver the materials to the testing laboratory at no cost to the CITY.
- C. An independent testing laboratory shall observe the preparation of the trial batch, and they shall prepare a minimum of fifteen (15) standard test cylinders in accordance with ASTM C 31 in addition to conducting slump (ASTM C 143), air content (C 231) and unit weight (C 138) tests. Compressive strength test on the cylinders shall subsequently be performed by the same laboratory in accordance with ASTM C 39 as follows: Test 3 cylinders at age 7 days; test 3 cylinders at age 21 days; test 3 cylinders at age 28 days and test 3 cylinders at 56 days. The cylinders shall be carefully identified as "Trial Mix, Contract No. \_\_\_\_\_, Product \_\_\_\_\_." If the average 28-day compressive strength of the trial mix is less than that specified, or if any single cylinder falls below the required strength by more than 500

psi, the mix shall be corrected, another trial batch prepared, test cylinders taken, and new tests performed as before. Any such additional trial batch testing required shall be performed at no additional cost to the CITY. Adjustments to the mix shall be considered refinements to the mix design and shall not be the basis for extra compensation to the CONTRACTOR.

- D. Mixing of concrete shall conform to the requirements of Chapter 4 of ACI 301 Specifications.
- E. Retempering of concrete or mortar which has partially hardened will not be permitted.

### 3.02 PREPARATION

- A. Earth surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. A vapor barrier specified in Section 07190 entitled "Vapor Barrier" shall be placed. The surface shall be free from standing water, mud, and debris at the time of placing concrete.
- B. No concrete shall be placed until the reinforcement steel and formwork have been erected in a manner acceptable to the ENGINEER. The CONTRACTOR shall notify the ENGINEER not less than two working days prior to Concrete Placement, allowing one day for review and any corrective measures which are required.
- C. Joints in Concrete
  - 1. Concrete surfaces upon or against which concrete is to be placed shall be given a roughened surface for good bond and a bonding agent shall be placed.
  - 2. After the surfaces have been prepared all approximately horizontal construction joints shall be covered with a layer of mortar approximately one-inch thick. The mortar shall have the same proportions of cement and sand as the regular concrete mixture. The water-cement ratio of the mortar in place shall not exceed that of the concrete to be placed upon it, and the consistency of the mortar shall be suitable for placing and working in the manner hereinafter specified. The mortar shall be spread uniformly and shall be worked thoroughly into all irregularities of the surface. Wire brooms shall be used where possible to scrub the mortar into the surface. Concrete shall be placed immediately upon the fresh mortar.
- D. Placing Interruptions
  - 1. When placing of concrete is to be interrupted long enough for the concrete to take a set, the working face shall be given a shape by the use of forms or other means, that will secure proper union with subsequent work; provided that construction joints shall be made only where acceptable to the ENGINEER. Cold joints will be sufficient cause for rejection of the work.
- E. Embedded Items
  - 1. No concrete shall be placed until all formwork, installation of parts to be embedded, reinforcing steel, and preparation of surfaces involved in the placing have been completed and accepted by the ENGINEER at least four hours before placement of

concrete. All surfaces of forms and embedded items that have become encrusted with dried grout from concrete previously placed shall be cleaned of all such grout before the surrounding or adjacent concrete is placed.

2. All inserts or other embedded items shall conform to the requirements herein.
- F. All reinforcement, anchor bolts, sleeves, inserts, and similar items shall be set and secured in the forms where shown on the Drawings or by shop drawings and shall be acceptable to the ENGINEER before any concrete is placed. Accuracy of placement is the responsibility of the CONTRACTOR.
- G. All anchor bolts called for on the drawings shall be cast-in-place in the concrete. Drilled, impact, adhesive or other types of anchors shall not be substituted for anchor bolts unless otherwise shown on the Drawings or approved by the ENGINEER. Anchor bolts shall conform to the requirements set forth in Section 05050 entitled "Metal Fastening".
- H. Casting New Concrete Against Old
1. Where concrete is to be cast against old concrete (any concrete which is greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting (exposing aggregate) prior to the application of an epoxy bonding agent.
- I. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited underwater, except where shown on the Drawings to be placed by the tremie method, nor shall the CONTRACTOR allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, will be subject to the review of the ENGINEER.
- J. Corrosion Protection
1. Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of 2 inches clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.
  2. Openings for pipes, inserts for pipe hangers and brackets, and the setting of anchors shall, where practicable, be provided for during the placing of concrete.
  3. Anchor bolts shall be accurately set, and shall be maintained in position by templates while being embedded in concrete.
  4. The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

### 3.03 PLACING CONCRETE

- A. Placing of concrete shall conform to the applicable requirements of Chapter 8 of ACI 301, the requirements of ACI 304, and the requirements of this Section.
- B. Non-Conforming Work or Materials
  - 1. Concrete which upon or before placing is found not to conform to the requirements specified herein shall be rejected and immediately removed from the Work. Concrete which is not placed in accordance with these Specifications, or which is of inferior quality, shall be removed and replaced by and at the expense of the CONTRACTOR.
- C. Unauthorized Placement
  - 1. No concrete shall be placed except in the presence of duly authorized representative of the ENGINEER. The CONTRACTOR shall notify the ENGINEER at least 24 hours in advance of placement of any concrete.
- D. Placement in Wall Forms
  - 1. Concrete shall not be dropped through reinforcement steel or into any deep form, whether reinforcement is present or not, causing separation of the coarse aggregate from the mortar on account of repeatedly hitting rods or the sides of the form as it falls, nor shall concrete be placed in any form in such a manner as to leave accumulation of mortar on the form surfaces above the placed concrete. In such cases, some means such as the use of hoppers and, if necessary, vertical ducts of canvas, rubber, or metal shall be used for placing concrete in the forms in a manner that it may reach the place of final deposit without separation. In no case shall the free fall of concrete exceed 4 feet below the ends of ducts, chutes, or buggies.
  - 2. Concrete shall be uniformly distributed during the process of depositing and in no case after depositing shall any portion be displaced in the forms more than 6 feet in horizontal direction. Concrete in forms shall be deposited in uniform horizontal layers not deeper than 2 feet; and care shall be taken to avoid inclined layers or inclined construction joints except where such are required for sloping members. Each layer shall be placed while the previous layer is still soft. The rate of placing concrete in forms shall not exceed 5 feet of vertical rise per hour.
- E. Casting New Concrete Against Old
  - 1. An epoxy adhesive bonding agent shall be applied to set surfaces of construction joints according to the manufacturer's written recommendations.
- F. Conveyor Belts and Chutes
  - 1. All ends of chutes, hopper gates, and all other points of concrete discharge throughout the CONTRACTOR'S conveying, hoisting and placing system shall be so designed and arranged that concrete passing from them will not fall separated into whatever receptacle immediately receives it. Conveyor belts, if used, shall be of a type acceptable to the ENGINEER. Chutes longer than 50 feet will not be permitted.

Minimum slopes of chutes shall be such that concrete of the specified consistency will readily flow in them. If a conveyor belt is used, it shall be wiped clean by a device operated in such a manner that none of the mortar adhering to the belt will be wasted. All conveyor belts and chutes shall be covered. Sufficient illumination shall be provided in the interior of all forms so that the concrete at the places of deposit is visible from the deck or runway.

G. Placement in Slabs

1. Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the pour. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screeded in an up-slope direction.

H. Temperature of Concrete

1. The temperature of concrete when it is being placed shall be not more than 90 degrees F. Concrete ingredients shall not be heated to a temperature higher than that necessary to keep the temperature of the mixed concrete, as placed, from falling below the specified minimum temperature. If concrete is placed when the weather is such that the temperature of the concrete would exceed 90 degrees Fahrenheit, the CONTRACTOR shall employ effective means, such as precooling of aggregates and mixing water using ice or placing at night, as necessary to maintain the temperature of the concrete, as it is placed, below 90 degrees Fahrenheit. The CONTRACTOR shall be entitled to no additional compensation on account of the foregoing requirements. During summer months concrete pours shall be scheduled in the morning or early part of the day when temperatures are cooler.

I. Pumping Equipment

1. Pumping equipment and procedures if used shall conform to the recommendations contained in the report of ACI Committee 304 on Placing Concrete by Pumping Methods, ACI 304.2R. The specified slump shall be measured at the point of discharge. The loss of slump in pumping shall not exceed 1-1/2 inches. Concrete used for compressive strength samples shall be taken at the discharge end of the pump unless otherwise approved by the ENGINEER.

- J. The order of placing concrete in all parts of the work shall be acceptable to the ENGINEER. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall have cured at least 7 days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the 2 adjacent wall panels have cured at least 14 days.

- K. The surface of the concrete shall be level whenever a run of concrete is stopped. To ensure a level, straight joint on the exposed surface of walls, a wood strip at least 3/4-inch thick shall be tacked to the forms on these surfaces. The concrete shall be carried about 1/2-inch above the underside of the strip. About one hour after the concrete is placed, the strip shall be removed and any irregularities in the edge formed by the strip shall be leveled with a trowel and all laitance shall be removed.

- L. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement. Vibrators shall be high speed power vibrators (8000 to 10,000 rpm) of an immersion type in sufficient number and with (at least one) standby units as required.
- M. Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are placed horizontally, the concrete shall be worked under the waterstops by hand, making sure that all air and rock pockets have been eliminated. Concrete surrounding the waterstops shall be given additional vibration, over and above that used for adjacent concrete placement to assure complete embedment of the waterstops in the concrete.
- N. Concrete in walls shall be internally vibrated and at the same time, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers of concrete shall not be placed until the layers previously placed have been worked thoroughly as specified. Vibrators shall be provided in sufficient numbers, with standby units as required, to accomplish the results herein specified within 15 minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall be kept from contact with the surfaces of the forms. Care shall be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its constituents.

### 3.04 CONCRETE FINISHING

- A. Concrete finishes are specified in Section 03350 entitled "Concrete Finishes".

### 3.05 CURING AND PROTECTION

- A. Curing is specified in Section 03370 entitled "Concrete Curing".

### 3.06 PLACING CONCRETE UNDER PRESSURE (PUMPING)

- A. Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall have the capacity for the operation. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. To obtain the least line resistance, the layout of the pipeline system shall contain a minimum number of bends with no change in pipe size. If two sizes of pipe must be used, the smaller diameter should be used at the pump end and the larger at the discharge end. When pumping is completed, the concrete remaining in the pipelines, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients.
- B. No aluminum parts shall be in contact with the concrete during the entire placing of concrete under pressure at any time.
- C. Prior to placing concrete under pressure, the CONTRACTOR shall submit the concrete mix design together with test results from a recognized testing laboratory proving the proposed

mix meets all requirements. In addition, at the CONTRACTOR'S option, an actual pumping test under field conditions may be performed prior to use of the accepted mix. This test requires a duplication of anticipated site conditions from beginning to end. The batching and truck mixing shall be the same as will be used; the same pump and operator shall be present and the pipe and pipe layouts will reflect the maximum height and distance contemplated.

- D. If the pumped concrete does not produce satisfactory end results, the CONTRACTOR shall discontinue the Pumping operation and proceed with the placing of concrete using conventional methods.
- E. The pumping equipment must have two cylinders and be designed to operate with one cylinder only in case the other one is not functioning. In lieu of this requirement, the CONTRACTOR may have a standby pump on the site during pumping.
- F. The minimum diameter of the hose (conduits) shall be four inches.
- G. Pumping equipment and hoses (conduits) that are not functioning properly shall be replaced.

### 3.07 ORDER OF PLACING CONCRETE

- A. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings and maximum lengths as indicated on Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall be have cured at least seven days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the two adjacent wall panels have cured at least 14 days.
- B. The surface of the concrete shall be level whenever a run of concrete is stopped.

### 3.08 CONCRETE IN COLD WEATHER

- A. Cold weather concreting procedures shall be in accordance with the requirements of ACI 306

### 3.09 CONCRETE IN HOT WEATHER

- A. Hot weather concreting procedures shall conform to the requirement of ACI 305.

### 3.10 DEFECTIVE CONCRETE

- A. As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until reviewed by the ENGINEER. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall have them repaired as specified herein. Concrete containing extensive voids, holes, honeycombing, or

similar depression defects, shall be completely removed and replaced. All repairs and replacements herein specified shall be promptly executed by the CONTRACTOR at its own expense.

- B. Defective surfaces to be repaired as specified in Article 3.10, Paragraph A of this Section, shall be cut back from true line a minimum depth of 1/2 inch over the entire area. Feathered edges will not be permitted. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, and not less than 1/32-inch depth of the surface film from all hard portions. The material used for repair shall be acceptable to the ENGINEER.
- C. Holes left by tie-rod cones shall be repaired in an acceptable manner with dry-packed cement grout or premixed patching material as accepted by the ENGINEER.
- D. All repairs shall be built up and shaped in such a manner that the completed work will conform to the requirements of Article 3.04 or 3.05 of this Section, as applicable, using acceptable methods which will not disturb the bond, cause sagging, or cause horizontal fractures. Surfaces of said repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.
- E. Prior to backfilling, all cracks that may have developed shall be "vee'd" and filled with sealant conforming to the requirements of Section 07920 entitled, "Sealants and Caulking". This repair method shall be done on the faces of members in contact with fill.

### 3.11 CARE AND REPAIR OF CONCRETE

- A. The CONTRACTOR shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the CITY. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the CONTRACTOR'S expense. This stipulation includes concrete experiencing cracking due to drying or thermal shrinkage of the concrete. Structural cracks shall be repaired using an epoxy injection system approved by the ENGINEER. Non-structural cracks shall be repaired using a hydrophilic resin pressure injected grout system approved by the ENGINEER, unless other means or repair are deemed necessary and approved by the ENGINEER.

- END OF SECTION -

## SECTION 03315 - GROUT

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials for grout in accordance with the provisions of this Section and shall form, mix place, cure, repair, finish, and do all other Work as required to produce finished grout, all in accordance with the requirements of the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals.
- B. Section 03300 - Cast-in-Place Concrete.
- C. Grout for sealing casing annular spaces is specified on the Structural Drawings.

#### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Specifications, codes, and standards shall be as specified in Section 03300 entitled "Cast-in-Place Concrete," and as referred to herein.
- B. Additional Commercial Standards  
CRD-C 621 - Corps of Engineers Specification for Nonshrink Grout.

#### 1.04 SUBMITTALS

- A. The CONTRACTOR shall submit certified test results verifying the compressive strength, shrinkage, and expansion requirements specified herein; and manufacturer's literature containing instructions and recommendations on the mixing, handling, placement and appropriate uses for each type of grout used in the work.

### PART 2 -- PRODUCTS

#### 2.01 PREPACKAGED NON-SHRINK CEMENTITIOUS GROUT

- A. Nonshrink grout shall be a prepackaged, inorganic, non-gas liberating, nonmetallic, cement-based grout requiring only the addition of water. Manufacturer's instructions shall be printed on each bag or other container in which the materials are packaged. The specific formulation for each class of nonshrink grout specified herein shall be that recommended by the manufacturer for the particular application.
- B. Nonshrink grouts shall have a minimum 28 day compressive strength of 5000 psi (ASTM C109, restrained), shall have no shrinkage (0.0 percent) and a maximum 4.0 percent expansion in the plastic state when tested in accordance with ASTM C 827, and shall have

no shrinkage (0.0 percent) and a maximum of 0.2 percent expansion in the hardened state when tested in accordance with CRD C 621.

- C. Cement based grout shall be Five Star Grout as manufactured by Five Star Products, Inc., Fairfield, Connecticut, or equal.
- D. Cementitious non-shrink grout shall be used at locations where there are no dynamic loads, the grout will not come in contact with wastewater or wastewater gases, and where non-shrink grout is identified on the Drawings. Applications include, but are not limited to, structural steel column base plates, gate frames and guides, and precast concrete to cast-in-place concrete joints.

## 2.02 PREPACKAGED NON-SHRINK EPOXY GROUT

- A. Epoxy-based non-shrink grout shall be a three component, 100 percent solids, solvent-free system designed for machinery grouting. Applications include, but are not limited to, anchoring, pump and motor bases, and any other equipment imparting dynamic loads to the support system.
- B. When non-shrink grout is identified on the Drawings in submerged (water or wastewater) or under wastewater gas environment, epoxy-based non-shrink grouts shall be used.
- C. The epoxy grout shall be delivered to site as prepackaged, three-component systems composing of the resin, hardener, and specially blended aggregates. The components shall be stored as recommended by the manufacturer until use.
- D. Non-shrink epoxy grout shall be Five Star DP Epoxy Grout by Five Star Products, Inc., Fairfield, Connecticut, or equal.

## 2.03 CEMENT GROUT

- A. Cement grout shall be composed of Portland cement sand in the proportion specified in the Contract Documents and the minimum amount of water necessary to obtain the desired consistency. If no proportion is indicated, cement grout shall consist of one part Portland cement to three parts sand. Water amount shall be as required to achieve desired consistency without compromising strength requirements. White Portland cement shall be mixed with Portland cement as required to match color of adjacent concrete.
- B. The minimum compressive strength at 28 days shall be 4000 psi.
- C. For beds thicker than 1-1/2 inch and/or where free passage of grout will not be obstructed by coarse aggregate, 1-1/2 parts of coarse aggregate having a top size of 3/8 inch should be added.
- D. Sand shall conform to the requirements of ASTM C144.

## 2.04 DOWEL/ANCHOR BOLT ADHESIVE SYSTEM

- A. When rebar or anchor bolts are specified to be drilled in and grouted on the Drawings, an adhesive system specified in Section 03200 entitled "Concrete Reinforcement" shall be

used for dowels and an adhesive system specified in Section 05050 entitled "Metal Fastening" shall be used for anchor bolts.

#### 2.05 CURING MATERIALS

- A. Curing materials shall be as recommended by the manufacturer.

#### 2.06 CONSISTENCY

- A. The consistency of grouts shall be that necessary to completely fill the space to be grouted for the particular application. Dry pack consistency is such that the grout is plastic and moldable but will not flow. Where "dry pack" is called for in the Contract Documents, it shall mean a grout of the above described consistency; the type of grout to be used shall be as specified herein for the particular application.

#### 2.05 MEASUREMENT OF INGREDIENTS

- A. Prepackaged grouts shall have ingredients measured by means recommended by the manufacturer.

### PART 3 -- EXECUTION

#### 3.01 GENERAL

- A. All curing, and protection of cement grout shall be as specified in Section 03370 entitled "Concrete Curing" (Methods 1 and 2); or as recommended by manufacturer. The finish of the grout surface shall match that of the adjacent concrete.
- B. All mixing, surface preparation, handling, placing, consolidation, and other means of execution for prepackaged grouts shall be done according to the instructions and recommendations of the manufacturer.

#### 3.02 CONSOLIDATION

- A. Grout shall be placed in such a manner, for the consistency necessary for each application, so as to assure that the space to be grouted is completely filled.

- END OF SECTION -

## SECTION 03350 - CONCRETE FINISHES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials, labor, and equipment required to provide finishes of all concrete surfaces specified herein and shown on the Drawings.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03100 - Concrete Formwork.
- B. Section 03300 - Cast-in-Place Concrete.
- D. Section 03315 – Grout.

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.
  - 1. ACI 301 -Specifications for Structural Concrete for Buildings.
  - 2. ACI 318 - Building Code Requirements for Structural Concrete.

#### 1.04 SUBMITTALS

- A. Submit the following in accordance with Section 01300 entitled "Submittals".
  - 1. Manufacturer's literature on all products specified herein.

### PART 2 -- PRODUCTS

#### 2.01 CONCRETE FLOOR SEALER

- A. Floor sealer shall be Sikagard 701W by Sika Corporation, Deck A Pell 40 by Chemprobe, or equal.

#### 2.02 CONCRETE LIQUID DENSIFIER AND SEALANT

- A. Concrete liquid densifier and sealant shall be a high performance, deeply penetrating concrete densifier and sealant. Product shall be odorless, colorless, VOC-compliant, non-yellowing silicate based solution designed to harden, dustproof and protect concrete floors subjected to heavy vehicular traffic and to resist black rubber tire marks on concrete surfaces. The product must contain a minimum solids content of 20% of which 50% is silicate. Acceptable products are Diamond Hard by the Euclid Chemical Company and Seal Hard by L&M Construction Chemicals or equal.

## PART 3 -- EXECUTION

### 3.01 FINISHES ON FORMED CONCRETE SURFACES

- A. After removal of forms, the finishes described below shall be applied in accordance with Article 3.05 of this Section entitled "Concrete Finish Schedule". Unless the finish schedule specifies otherwise, all surfaces shall receive at least a Type I finish. The ENGINEER shall be the sole judge of acceptability of all concrete finish work.
1. Type I - Rough: All fins, burrs and other projections left by the forms shall be removed. All holes left by removal of ends of ties, and all other holes, depressions, or voids shall be filled solid with cement grout after first being thoroughly wetted. Honeycombs shall be chipped back to solid concrete as directed, prior to patching with cement grout. Holes shall be filled with a small tool that will permit packing the hole solidly with cement grout. Cement grout shall consist of one part cement to three parts sand, and the amount of mixing water shall be as little as consistent with the requirements of handling and placing. Color of cement grout shall match the adjacent wall surface.
  2. Type II - Grout Cleaned: Where this finish is required, it shall be applied after completion of Type I finish. After the concrete has been predampened, a slurry consisting of one part cement (including an appropriate quantity of white cement in order to produce a color matching the surrounding concrete) and 1-1/2 parts sand passing the No. 16 sieve, by damp loose volume, shall be spread over the surface with clean burlap pads or sponge rubber floats. Mix proportions shall be submitted to the ENGINEER after a sample of the work is established and accepted. Any surplus shall be removed by scraping and then rubbing with clean burlap. The finish shall be kept damp for at least 36 hours after application.
  3. Type III - Smooth Rubbed: Where this finish is required, it shall be applied after the completion of the Type I finish. No rubbing shall be done before the concrete is thoroughly hardened and the mortar used for patching is firmly set. A smooth, uniform surface shall be obtained by wetting the surface and rubbing it with a carborundum stone to eliminate irregularities. Unless the nature of the irregularities require it, the general surface of the concrete shall not be cut into. Corners and edges shall be slightly rounded by the use of the carborundum stone. Brush finishing or painting with grout or neat cement will not be permitted. A 100 square foot example shall be established at the beginning of the project to establish acceptability.

### 3.02 SLAB AND FLOOR FINISHES

- A. The finishes described below shall be applied to floors, slabs, flow channels and top of walls in accordance with Article 3.05 of this Section entitled "Concrete Finish Schedule". The ENGINEER shall be the sole judge of acceptability of all such finish work.
1. Type "A" - Screeded: This finish shall be obtained by placing screeds at frequent intervals and striking off to the surface elevation required. When a Type "F" finish is subsequently to be applied, the surface of the screeded concrete shall be roughened with a rake to 1/2" minimum deep grooves prior to final set.
  2. Type "B" - Wood Floated: This finish shall be obtained after completion of a Type "A" finish by working a previously screeded surface with a wood float until the

desired texture is reached. Floating shall begin when the water sheen has disappeared and when the concrete has sufficiently hardened so that a person's foot leaves only a slight imprint. If wet spots occur, water shall be removed with a squeegee. Care shall be taken to prevent the formation of laitance and excess water on the finished surface. The finished surface shall be true, even, and free from blemishes and other irregularities.

3. Type "C" - Cork Floated: This finish shall be similar to Type "B" but slightly smoother than that obtained with a wood float. It shall be obtained by power or band floating with cork floats.
4. Type "D" - Steel Troweled: This finish shall be obtained after completion of a Type "B" finish. When the concrete has hardened sufficiently to prevent excess fine material from working to the surface, the surface shall be compacted and smoothed with not less than two thorough and complete steel troweling operations. In areas which are to receive a floor covering such as tile, resilient flooring, or carpeting, only one troweling operation is required. The finish shall be brought to a smooth, dense surface, free from defects and blemishes.
5. Type "E" - Broom or Belt: This finish shall provide the surface with a transverse scored texture by drawing a broom or burlap belt across the surface immediately after completion of a Type "B" finish.
6. Type "G" - Hardened Finish: Either a liquid hardened finish or an aggregate hardened finish shall be provided at the CONTRACTOR'S option.
  - a. Liquid hardened finish shall be provided by application of a liquid floor hardener. Floors to receive this finish shall have previously received a Type "D" finish. Liquid hardener shall be applied between 30 to 60 days after concrete placement. Surface to be treated shall be dry, clean and free of all loose dust, dirt, oil, wax, sealers and curing compounds. Application procedure shall be in accordance with manufacturer's instructions and shall consist of a three-coat treatment.
  - b. Aggregate hardened finish shall be provided by applying an aggregate floor hardener concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
8. Type "H" - Non-Slip Finish: This finish shall be provided by applying a non-slip shake-on aggregate concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
9. Type "J" - Raked Finish: This finish shall be provided by raking the surface as soon as the condition of the concrete permits by making depressions of +/-1/4 inch.

### 3.03 SEALING OF CONCRETE FLOOR

- A. After installation of all equipment and piping, and after completion of other related construction activities, all floor slabs which are to remain unpainted and not intended to be immersed shall be sealed with a floor sealer unless stated otherwise. Remove all dirt, droppage, oil, grease, asphalt or other foreign matter with caustics and detergents as required prior to application. Sealer shall be applied in accordance with the manufacturer's recommendations.

- B. Floor slabs subjected to vehicular traffic shall be sealed with the concrete liquid densifier and sealer. All other floor slabs to receive sealer shall be sealed with concrete floor sealer.

3.04 FINISHES ON EQUIPMENT PADS

- A. Formed surfaces of equipment pads shall receive a Type III finish.
- B. Top surfaces of equipment pads, except those surfaces subsequently required to receive non-shrink grout and support equipment bases, shall receive a Type "D" finish, unless otherwise noted. Surfaces which will later receive non-shrink grout shall, before the concrete takes its final set, be made rough by removing the sand and cement that accumulates on the top to the extent that the aggregate will be exposed with irregular indentations in the surface up to 1/2 inch deep.

3.05 CONCRETE FINISH SCHEDULE

Item	Type of Finish
Inner face of walls of tanks, flow channels, wet wells, perimeter walls, and miscellaneous concrete structures to be coated in accordance with Section 09900 - Painting.	I*
Exterior concrete walls below grade	I
Exterior exposed concrete walls, ceilings, beams, utility access, handholes, miscellaneous structures and columns (including top of wall) to one foot below grade. All other exposed concrete surfaces not specified elsewhere	II
All interior exposed concrete walls and vertical surfaces in buildings	III
Interior exposed ceiling, including beams	III
Floors of process equipment tanks or basins, and slabs to receive roofing material or waterproof membranes	B
All interior finish floors of buildings and structures and walking surfaces which will be continuously or intermittently wet	C
All interior finish floors of buildings and structures which are not continuously or intermittently wet	D
Floors to receive tile, resilient flooring, or carpeting	D
Concrete floors in flow channels	D
Exterior concrete sidewalks, steps, ramps, decks, slabs on grade and landings exposed to weather	E
Floors of process equipment tanks indicated on Drawings to receive grout topping	F
Garage and storage area floors	G

<b>Item</b>	<b>Type of Finish</b>
Precast concrete form panels, hollow core planks, double tees	J

*\* Finish shall be acceptable to the coating applicator and manufacturer. See Section 09900 entitled "Painting".*

- END OF SECTION -

## SECTION 03370 - CONCRETE CURING

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall protect all freshly deposited concrete from premature drying and excessively hot or cold temperatures, and maintain with minimal moisture loss at a relatively constant temperature for the period of time necessary for the hydration of the cement and proper hardening of the concrete in accordance with requirements specified herein.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03100 - Concrete Formwork.
- B. Section 03300 - Cast-in-Place Concrete.
- C. Section 03315 – Grout.
- D. Section 03350 - Concrete Finishes.

#### 1.03 SUBMITTALS

- A. In accordance with the procedures and requirements set forth in the Section entitled "Submittals", the CONTRACTOR shall submit the following:
  - 1. Proposed procedures for protection of concrete under wet weather placement conditions.
  - 2. Proposed procedures for hot and cold weather placement.
  - 3. Proposed procedures for protection and curing of concrete during normal conditions.
  - 4. Proposed materials and procedures for moisture preservation.
  - 5. Proposed method of measuring concrete surface temperature changes.
  - 6. Manufacturer's literature and material certification for proposed curing compounds.

#### 1.04 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of other requirements of these specifications all work hereunder shall conform to the applicable requirements of the referenced portions of the following documents, to the extent that the requirements therein are not in conflict with the provisions of this Section.
  - 1. Specifications for Structural Concrete for buildings, ACI 301.
  - 2. Guide for Measuring, Mixing, Transporting, and Placing Concrete, ACI 304.
  - 3. Hot Weather Concreting, ACI 305.

4. Cold Weather Concreting, ACI 306.
5. Standard Practice for Curing Concrete, ACI 308.
6. Specifications for Sheet Materials for Curing Concrete, ASTM C171.
7. Specification for Liquid Membrane - Forming Compounds for Curing Concrete, ASTM C309.
8. Federal Specification TT-C-800.

#### 1.05 QUALITY ASSURANCE

- A. Curing compound shall not be used on any surface where concrete, coatings, or other material will be bonded unless the manufacturer certifies that the curing compound will not prevent bond or indicates measures to be taken to completely remove the curing compound from areas to receive bonded applications, and specifically approved by the ENGINEER.
- B. Care shall be taken to ensure that curing compounds are compatible with all finish concrete castings.
- C. Curing compounds shall not be used on surfaces exposed to water in potable water storage tanks and treatment plants unless curing compound is certified in accordance with ANSI/NSF Standard 61.

### PART 2 -- PRODUCTS

#### 2.01 CURING COMPOUNDS

- A. All materials shall meet the ASTM specifications C309, Type 1-D, Class B or Federal Specification TT-C-800 and shall have a minimum solids content of 30 percent. The curing compound shall contain a fugitive dye so that areas of application are readily distinguishable.

#### 2.02 EVAPORATION REDUCER

- A. Evaporation reducer shall be BASF "Confilm" or Euclid Chemical "Euco-Bar", or equal.

#### 2.03 BURLAP MATS

- A. Burlap mats shall conform to AASHTO M-182.

### PART 3 -- EXECUTION

#### 3.01 PROTECTION AND CURING

- A. All concrete work shall be protected from the elements, flowing water and from defacement of any nature during construction operations.

- B. As soon as the concrete has been placed and horizontal top surfaces have received their required finish, provision shall be made for maintaining the concrete in a moist condition for at least a 7-day period thereafter except for high early strength concrete, for which the period shall be at least the first three days after placement. Horizontal surfaces shall be kept covered, and intermittent, localized drying will not be permitted.
- C. Walls that will be exposed on one side with either fluid or earth backfill on the opposite side shall be continuously wet cured for a minimum of five days. Use of curing compound will not be acceptable for applications of this type.
- D. After placing and finishing, use one or more of the following methods to preserve moisture in concrete:
  - 1. Ponding or continuous fogging or sprinkling.
  - 2. Application of mats or fabric kept continuously wet.
  - 3. Continuous application of steam (under 150 degrees Fahrenheit).
  - 4. Application of sheet materials conforming to ASTM C171.
  - 5. If approved by the ENGINEER, application of a curing compound in accordance with Article 3.05. Apply the compound in accordance with the manufacturer's recommendation on after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 200 square feet per gallon. For rough surfaces, apply in two directions at right angles to each other.
- E. Keep absorbent forms wet until they are removed. After form removal, cure concrete by one of the methods in paragraph D.
- F. Any of the curing procedures used in Paragraph 3.01-D may be replaced by one of the other curing procedures listed in Paragraph 3.01-D after the concrete is one-day old. However, the concrete surface shall not be permitted to become dry at any time.

### 3.02 CONCRETE TEMPERATURE

- A. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40 F for more than three successive days, concrete shall be delivered to meet the following minimum temperature immediately after placement:
  - 1. 55 degrees Fahrenheit for sections less than 12 in. in the least dimension
  - 2. 50 degrees Fahrenheit for sections 12 in. to 36 in. in the least dimension
  - 3. 45 degrees Fahrenheit for sections 36 in. to 72 in. in the least dimension
  - 4. 40 degrees Fahrenheit for sections greater than 72 in. in the least dimension
- B. The temperature of concrete as placed shall not exceed these values by more than 20 degrees Fahrenheit.

- C. These minimum requirements may be terminated when temperatures above 50 degrees Fahrenheit occur during more than half of any 24 hour duration.
- D. Unless otherwise specified or permitted, the temperature of concrete as delivered shall not exceed 90 degrees Fahrenheit.
- E. During and following curing, do not allow the surface of the concrete to change temperature more than the following:
  - 1. 50 degrees Fahrenheit in any 24-hr period for sections less than 12 in. in the least dimension
  - 2. 40 degrees Fahrenheit for sections from 12 to 36 in. in the least dimension
  - 3. 30 degrees Fahrenheit for sections 36 to 72 in. in the least dimension
  - 4. 20 degrees Fahrenheit for sections greater than 72 in. in the least dimension

### 3.03 CURING CONCRETE UNDER COLD WEATHER CONDITIONS

- A. Suitable means shall be provided for a minimum of 72 hours after placing concrete to maintain it at or above the minimum as placed temperatures specified in Article 3.02 herein.. During the 72-hour period, the concrete surface shall not be exposed to air more than 20°F above the minimum as placed temperatures.
- B. Stripping time for forms and supports shall be increased as necessary to allow for retardation in concrete strength caused by colder temperatures. This retardation is magnified when using concrete made with blended cements or containing fly ash or ground granulated blast furnace slag. Therefore, curing times and stripping times shall be further increased as necessary when using these types of concrete.
- C. The methods of protecting the concrete shall be approved by the ENGINEER and shall be such as will prevent local drying. Equipment and materials approved for this purpose shall be on the site in sufficient quantity before the work begins. The CONTRACTOR shall assist the ENGINEER by providing holes in the forms and the concrete in which thermometers can be placed to determine the adequacy of heating and protection. All such thermometers shall be furnished by the CONTRACTOR in quantity and type which the ENGINEER directs.
- D. Curing procedures during cold weather conditions shall conform to the requirements of ACI 306.

### 3.04 CURING CONCRETE UNDER HOT WEATHER CONDITIONS

- A. When air temperatures exceed 85°F, the CONTRACTOR shall take extra care in placing and finishing techniques to avoid formation of cold joints and plastic shrinkage cracking. If ordered by the ENGINEER, temporary sun shades and/or windbreakers shall be erected to guard against such developments, including generous use of wet burlap coverings and fog sprays to prevent drying out of the exposed concrete surfaces.
- B. Immediately after screeding, horizontal surfaces shall receive an application of evaporation reducer. Apply in accordance with manufacturer's instructions. Final finish work shall begin as soon as the mix has stiffened sufficiently to support the experienced workers.

- C. Curing and protection of the concrete shall begin immediately after completion of the finishing operation. Continuous moist-curing consisting of method 1 or 2 listed in paragraph 3.01C is mandatory for at least the first 24 hours. Method 2 may be used only if the finished surface is not marred or blemished during contact with the coverings.
- D. At the end of the initial 24-hour period, curing and protection of the concrete shall continue for at least four (4) additional days using one of the methods listed in paragraph 3.01D.
- E. Curing procedures during hot weather conditions shall conform to the requirements of ACI 305.

### 3.05 USE OF CURING COMPOUND

- A. Curing compound shall be used only where specifically approved by the ENGINEER. Curing compound shall not be used on surfaces to receive subsequent coatings. Curing compound shall never be used for curing exposed walls with fluid or earth backfill on the opposite side. A continuous wet cure for a minimum of five days is required for these applications. Curing compound shall not be used on surfaces exposed to water in potable water storage tanks and treatment plants unless curing compound is certified in accordance with ANSI/NSF Standard 61.
- B. When permitted, the curing compound shall maintain the concrete in a moist condition for the required time period, and the subsequent appearance of the concrete surface shall not be affected.
- C. The compound shall be applied in accordance with the manufacturer's recommendations after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 300 square feet per gallon. For rough surfaces, apply in two directions at right angles to each other.

### 3.06. EARLY TERMINATION OF CURING

- A. Moisture retention measures may be terminated earlier than the specified times only when at least one of the following conditions is met:
  - 1. The strength of the concrete reaches 85 percent of the specified 28-day compressive strength in laboratory-cured cylinders representative of the concrete in place, and the temperature of the in-place concrete has been constantly maintained at 50 degrees Fahrenheit or higher.
  - 2. The strength of concrete reaches the specified 28-day compressive strength as determined by accepted nondestructive methods or laboratory-cured cylinder test results.

- END OF SECTION -

**DIVISION 5**  
**METALS**



- L. ASTM A536 Standard Specification for Ductile Iron Castings
- M. ASTM A570 Standard Specification for Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality
- N. ASTM A572/A572M-94C Standard Specification for High Strength Low-Alloy Columbium-Vanadium Structural Steel Grade 50
- O. ASTM A666 Standard Specification for Austenitic Stainless Steel, Sheet, Strip, Plate, and Flat Bar for Structural Applications
- P. ASTM B26 Standard Specification for Aluminum-Alloy Sand Castings
- Q. ASTM B85 Standard Specification for Aluminum-Alloy Die Castings
- R. ASTM B108 Standard Specification for Aluminum-Alloy Permanent Mold Castings
- S. ASTM B138 Standard Specification for Manganese Bronze Rod, Bar, and Shapes
- T. ASTM B209 Standard Specification for Aluminum-Alloy Sheet and Plate
- U. ASTM B221 Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
- V. ASTM B308 Standard Specification for Aluminum-Alloy Standard Structural Shapes, Rolled or Extruded
- W. ASTM B574 Standard Specification for Nickel-Molybdenum-Chromium Alloy Rod
- X. ASTM F468 Standard Specification for Nonferrous Bolts, Hex Cap Screws, and Studs for General Use

#### 1.04 SUBMITTALS

- A. Material certifications shall be submitted along with any shop drawings for metal products and fabrications required by other sections of the Specifications.

#### 1.05 QUALITY ASSURANCE

- A. CITY may engage the services of a testing agency to test any metal materials for conformance with the material requirements herein. If the material is found to be in conformance with Specifications the cost of testing will be borne by the CITY. If the material does not conform to the Specifications, the cost of testing shall be paid by the CONTRACTOR and all materials not in conformance as determined by the ENGINEER shall be replaced by the CONTRACTOR at no additional cost to the CITY. In lieu of replacing materials the CONTRACTOR may request further testing to determine conformance, but any such testing shall be paid for by the CONTRACTOR regardless of outcome of such testing.

PART 2 -- PRODUCTS

2.01 CARBON AND LOW ALLOY STEEL

A. Material types and ASTM designations shall be as listed below:

- |   |                                     |
|---|-------------------------------------|
| 1. Structural W Shapes                                      | A 992 (50 ksi)                      |
| 2. Structural S, M, C, L Shapes                             | A 36 (36 ksi)                       |
| 3. Structural HP Shape                                      | A 572, Grade 50 (50 ksi)            |
| 4. Structural Tubing  | A 500, Grade B or A 501 (42 ksi)    |
| 5. Structural Pipe  | A 53, Type E or S, Grade B (35 ksi) |
| 6. Plates and Bars  | A 36 U.N.O. (36 ksi)                |
| 7. Sheet Steel  | A 570, Grade C                      |
| 8. Cold-Formed Structural Studs and Joists<br>(18-22 gauge) | A 446, Grade C                      |
| 8. Cold-Formed Structural Studs and Joists<br>(12-16 gauge) | A 446, Grade D                      |

2.02 STAINLESS STEEL

A. All stainless steel fabrications shall be Type 316.

B. Material types and ASTM designations are listed below:

- |                      |                           |
|----------------------|---------------------------|
| 1. Plates and Sheets | ASTM A167 or A666 Grade A |
| 2. Structural Shapes | ASTM A276                 |

2.03 ALUMINUM

A. All aluminum shall be alloy 6061-T6, unless otherwise noted or specified herein.

B. Material types and ASTM designations are listed below:

- |                      |                        |
|----------------------|------------------------|
| 1. Structural Shapes | ASTM B308              |
| 2. Castings          | ASTM B26, B85, or B108 |
| 3. Extruded Bars     | ASTM B221 - Alloy 6061 |

- 4. Extruded Rods, Shapes and Tubes                      ASTM B221 - Alloy 6063
- 5. Plates    ASTM B209 - Alloy 6061
- 6. Sheets    ASTM B221 - Alloy 3003

- C. All aluminum structural members shall conform to the requirements of Section 05140 entitled "Structural Aluminum".
- D. All aluminum shall be provided with mill finish unless otherwise noted.
- E. Where bolted connections are indicated, aluminum shall be fastened with Type 316 stainless steel bolts.
- F. Aluminum in contact with dissimilar materials shall be insulated with an approved dielectric.

2.04 CAST IRON

- A. Material types and ASTM designations are listed below:

- 1. Gray    ASTM A48 Class 30B
- 2. Malleable    ASTM A47
- 3. Ductile    ASTM A536 Grade 60-40-18

2.05 BRONZE

- A. Material types and ASTM designations are listed below:

- 1. Rods, Bars and Sheets                                      ASTM B138 - Alloy B Soft

2.06 HASTELLOY

- A. All Hastelloy shall be Alloy C-276.

PART 3 – EXECUTION (NOT USED)

- END OF SECTION -

## SECTION 05050 - METAL FASTENING

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials, labor, and equipment required to provide all metal welds and fasteners not otherwise specified, in accordance with the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 05010 - Metal Materials

#### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

1. Florida Building Code
2. AISC Specification for Structural Joints Using ASTM A325 or A490 Bolts.
3. AISC Code of Standard Practice
4. AWS D1.1 Structural Welding Code - Steel
5. AWS D1.2 Structural Welding Code - Aluminum6.Aluminum Association Specifications for Aluminum Structures
7. ASTM A572/A572M-94C Standard Specification for High Strength Low-Alloy Columbium-Vanadium Structural Steel Grade 50
9. ASTM A36 Standard Specification for Carbon Structural Steel
10. ASTM A325 Standard Specification for High-Strength Bolts for Structural Steel Joints
11. ASTM A489 Standard Specification for Eyebolts
12. ASTM A490 Standard Specification for Quenched and Tempered Alloy Steel Bolts for Structural Steel Joints
13. ASTM A563 Standard Specifications for Carbon and Alloy Steel Nuts

- |     |            |  |
|-----|------------|--|
| 14. | ASTM D1785 | Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe                   |
| 15. | ASTM F436  | Standard Specification for Hardened Steel Washers                                  |
| 16. | ASTM F467  | Standard Specification for Nonferrous Nuts for General Use                         |
| 17. | ASTM F593  | Standard Specification for Stainless Steel Bolts; Hex Cap Screws, and Studs        |
| 18. | ASTM F594  | Standard Specification for Stainless Steel Nuts                                    |
| 19. | ASTM F1554 | Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength |

#### 1.04 SUBMITTALS

- A. Submit the following in accordance with Section 01300 entitled "Submittals":
  - 1. Shop Drawings providing the fastener's manufacturer and type and certification of the fastener's material and capacity.
  - 2. Manufacturer's installation instructions.
  - 3. Copy of valid certification for each person who is to perform field welding.
  - 4. Certified weld inspection reports, when required.
  - 5. Welding procedures.
  - 6. For outdoor equipment, anchorage calculations to resist wind loads, signed and sealed by a Professional Engineer registered in the State of Florida.

#### 1.05 QUALITY ASSURANCE

- A. Fasteners not manufactured in the United States shall be tested and certification provided with respect to specified quality and strength standards. Certifications of origin shall be submitted for all U.S. fasteners supplied on the project.
- B. Installer Qualifications: Drilled-in anchors shall be installed by an Installer with at least three years of experience performing similar installations. Installed shall be certified as an Adhesive Anchor Installer in accordance with ACI-CRSI Adhesive Anchor Installation Certification Program.
- C. Installer Training: Conduct a thorough training with the manufacturer or the manufacturer's representative for the Installer on the project. Training shall consist of a review of the complete installation process for drilled-in anchors, to include but not be limited to the following:
  - 1. Hole drilling procedure.
  - 2. Hole preparation and cleaning technique.

3. Adhesive injection technique and dispenser training/maintenance.
  4. Rebar doweling preparation and installation.
  5. Proof loading/torquing.
- D. All steel welding shall be performed by welders certified in accordance with AWS D1.1. All aluminum welding shall be performed by welders certified in accordance with AWS D1.2. Certifications of field welders shall be submitted prior to performing any field welds.
- E. Welds and high strength bolts used in connections of structural steel will be visually inspected in accordance with Article 3.04.
- F. The CITY may engage an independent testing agency to perform testing of welded connections and to prepare test reports in accordance with AWS. Inadequate welds shall be corrected or redone and retested to the satisfaction of the ENGINEER and/or an acceptable independent testing laboratory, at no additional cost to the CITY.
- G. Provide a welding procedure for each type and thickness of weld. For welds that are not prequalified, include a Performance Qualification Report. The welding procedure shall be given to each welder performing the weld. The welding procedure shall follow the format in Annex E of AWS D1.1 with relevant information presented.

## PART 2 -- PRODUCTS

### 2.01 ANCHOR RODS (ANCHOR BOLTS)

- A. For all conditions throughout this Contract, all anchor rods shall be Type 316 stainless steel conforming to ASTM F-593 unless noted otherwise.
- B. Nuts shall conform to ASTM F-594, alloy 316.
- C. Where anchor rods are used to anchor galvanized steel or are otherwise specified to be galvanized, anchor rods and nuts shall be hot-dip galvanized in accordance with ASTM F1554.
- D. Where pipe sleeves around anchor bolts are shown on the Drawings, pipe sleeves shall be cut from Schedule 40 PVC plastic piping meeting the requirements of ASTM D1785 unless noted otherwise.
- E. Equipment manufacturers, fabricators, and suppliers shall design and furnish anchor bolts as required to install the supplied units. The anchor bolt layout shall be coordinated with concrete work as specified herein.
- F. Drilled in type anchor bolts, either adhesive types or mechanical types shall not be used unless approved in writing by the manufacturer/fabricator of equipment or covers, subject to acceptance by the ENGINEER. All operating pieces of equipment such as pumps, generators, motors etc. shall not be anchored with wedge anchors or other

mechanical anchors. Drilled in type anchor bolts shall be Type 316 stainless steel. Drilled in type anchor bolts are specified under Article 2.04 of this Section entitled "Concrete Anchors".

## 2.02 HIGH STRENGTH BOLTS

- A. High strength bolts and associated nuts and washers shall be in accordance with ASTM A325 or ASTM A490. Bolts, nuts and washers shall meet the requirements of AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
- B. Where high strength bolts are used to connect galvanized steel or are otherwise specified to be galvanized, bolts, nuts, and washers shall be hot-dip galvanized in accordance with ASTM A325.

## 2.03 STAINLESS STEEL BOLTS

- A. Stainless steel bolts shall conform to ASTM F-593. All underwater fasteners shall be Type 316 stainless steel. Unless otherwise specified, fasteners for aluminum and stainless steel members shall be Type 316 stainless steel.
- B. Stainless steel bolts shall have hexagonal heads with a raised letter or symbol on the bolts indicating the manufacturer, and shall be supplied with hexagonal nuts meeting the requirements of ASTM F594. Nuts shall be of the same alloy as the bolts.

## 2.04 CONCRETE ANCHORS

- A. Where concrete anchors are called for on the Drawings, one of the types listed below shall be used; except, where one of the types listed below is specifically called for on the Drawings, only that type shall be used. Unless otherwise noted, all concrete anchors which are submerged, or are used in hanging items or have direct tension induced upon them, or which are subject to vibration from equipment such as pumps and generators, shall be adhesive anchors. The determination of anchors equivalent to those listed below shall be on the basis of test data performed by a commercial testing laboratory. There are two types used:
  - 1. Expansion anchors shall be wedge, sleeve, drop-in or undercut mechanical anchors.
  - 2. Adhesive anchors shall be two part injection type.
- B. All concrete anchors shall be considered structural anchors that transmit load between structural elements and/or life-safety related attachments. Expansion anchors shall be recommended by the anchor manufacturer for use in cracked concrete and shall be evaluated according to ACI 355.2 Qualifications of Post-Installed Mechanical Anchors in Concrete. Adhesive anchors shall be tested in accordance with the ICC Evaluation Service acceptance criteria to be creep resistant and capable of resisting long-term tensile loads.
- C. Wedge Anchors: Wedge anchors shall be "Kwik Bolt TZ" by Hilti, Inc., "TruBolt +" by ITW Redhead, "Strong-Bolt 2" by Simpson Strong-Tie Co. or "Powerstud SD-1" or "Powerstud SD-2" by DeWalt. Sleeve Anchors: Sleeve anchors shall be "HSL-3 Heavy

Duty Sleeve Anchor” by Hilti, Inc. or “Power-Bolt +” by DeWalt. Drop-in anchors shall be “Drop-In” by Simpson Strong-Tie Co. or “Multi-Set II Drop-In Anchor” by ITW Redhead or equal. Undercut anchors shall be “HDA Undercut Anchor” by Hilti, Inc or equal. All anchors shall be embedded to the depths shown on the Drawings. If no embedment depth is given, the minimum embedment depth as recommended by the manufacturer shall be used. Expansion anchors shall not be used to hang items from above or in any other situations where direct tension forces are induced in anchor.

- D. Adhesive anchors shall consist of threaded rods or bolts anchored with an adhesive system into hardened concrete or grout-filled masonry. The adhesive system shall use a two-component adhesive mix and shall be injected with a static mixing nozzle following manufacturer's instructions. All holes shall be drilled with a carbide bit unless otherwise recommended by the manufacturer. Thoroughly clean drill holes of all debris and drill dust as recommended by the manufacturer. Where depth of hole exceeds the length of the static mixing nozzle, a plastic extension hose shall be used to ensure proper adhesive injection from the back of the hole. Injection of adhesive into the hole shall utilize a piston plug to minimize the formation of air pockets. Wipe rod free from oil that may be present from shipping or handling. The embedment depth of the rod/bolt shall provide a minimum allowable bond strength that is equal to the allowable tensile capacity of the rod/bolt unless noted otherwise on the Drawings. Adhesive anchors shall be “Epcon A7” or “Epcon C6+ Adhesive Anchoring System” by ITW Redhead, “HIT HY-200 Adhesive Anchoring System” by Hilti, Inc., “SET Epoxy Tie High Strength Anchoring Adhesive” or “AT High Strength Anchoring Adhesive” by Simpson Strong-Tie Co., or “AC 100+ Gold” Adhesive Anchoring System by DeWalt.
- E. Alternate adhesive systems shall be IBC compliant for use in both cracked and uncracked concrete, must comply with the latest revision of ICC-ES Acceptance Criteria AC308, and shall have a valid ICC-ES report in accordance with the building code. Installation of adhesive system shall be per manufacturer's recommendations and as required in Item D above.
- F. Concrete anchors used to anchor steel shall be a threaded steel rod per manufacturer's recommendations for proposed adhesive system, but shall not have a yield strength (fy) less than 58 ksi nor an ultimate strength (fu) less than 72.5 ksi, unless noted otherwise. All concrete anchors shall be Type 316 stainless steel except where steel to be anchored is galvanized, concrete anchors shall also be galvanized.
- G. Concrete anchors used to anchor aluminum, FRP, or stainless steel shall be Type 304 stainless steel unless noted otherwise. All underwater concrete anchors shall be Type 316 stainless steel.

## 2.05 MASONRY ANCHORS

- A. Anchors for fastening to solid or grout-filled masonry shall be adhesive anchors as specified above for concrete anchors.
- B. Anchors for fastening to hollow masonry or brick shall be adhesive anchors consisting of threaded rods or bolts anchored with an adhesive system dispensed into a screen tube inserted into the masonry. The adhesive system shall use a two-component adhesive mix and shall inject into the screen tube with a static mixing nozzle. Thoroughly clean drill holes of all debris and drill dust with nylon (not wire) brush prior to installation of

adhesive and anchor. CONTRACTOR shall follow manufacturer's installation instructions. The adhesive system shall be "HIT HY-70 System" as manufactured by Hilti, Inc., or "AC100+ Acrylic Adhesive" by DeWalt, "SET-XP" as manufactured by Simpson Strong-Tie Co.

- C. Masonry anchors used to anchor steel shall be a threaded steel rod per manufacturer's recommendations for proposed adhesive system, but shall not have a yield strength (fy) less than 58 ksi nor an ultimate strength (fu) less than 72.5 ksi, unless noted otherwise. All masonry anchors shall be Type 316 stainless steel except where steel to be anchored is galvanized, masonry anchors shall also be galvanized.
- D. Masonry anchors used to anchor aluminum, FRP, or stainless steel shall be Type 304 stainless steel unless noted otherwise. All underwater anchors shall be Type 316 stainless steel.

## 2.06 WELDS

- A. Electrodes for welding structural steel and all ferrous steel shall comply with AWS Code, using E70 series electrodes for shielded metal arc welding (SMAW), or F7 series electrodes for submerged arc welding (SAW).
- B. Electrodes for welding aluminum shall comply with the Aluminum Association Specifications and AWS D1.2.
- C. Electrodes for welding stainless steel and other metals shall comply with AWS code.

## 2.07 WELDED STUD CONNECTORS

- A. Welded stud connectors shall conform to the requirements of AWS D1.1 Type C.

## 2.08 EYEBOLTS

- A. Eyebolts shall conform to ASTM A489 unless noted otherwise.

## 2.09 HASTELLOY FASTENERS

- A. Hastelloy fasteners and nuts shall be constructed of Hastelloy C-276.

## 2.10 ANTISEIZE LUBRICANT

- A. Antiseize lubricant shall be C5-A Anti-Seize by Loctite Corporation, Molykote P-37 Anti-Seize Paste by Dow Corning, 3M Anti-Seize by 3M, or equal.

## PART 3 -- EXECUTION

### 3.01 MEASUREMENTS

- A. The CONTRACTOR shall verify all dimensions and review the Drawings and shall report any discrepancies to the ENGINEER for clarification prior to starting fabrication.

### 3.02 ANCHOR INSTALLATION

#### A. Anchor Rods, Concrete Anchors, and Masonry Anchors

1. Anchor rods shall be installed in accordance with AISC "Code of Standard Practice" by setting in concrete while it is being placed and positioned by means of a rigidly held template.
2. The CONTRACTOR shall verify that all concrete and masonry anchors have been installed in accordance with the manufacturer's recommendations and that the capacity of the installed anchor meets or exceeds the specified safe holding capacity.
3. Concrete anchors shall not be used in place of anchor rods without ENGINEER'S approval.
4. All stainless steel threads shall be coated with antiseize lubricant.

#### B. High Strength Bolts

1. All bolted connections for structural steel shall use high strength bolts. High strength bolts shall be installed in accordance with AISC "Specification for Structural Joints, using A325 or A490 Bolts". All bolted joints shall be Type N, snug-tight, bearing connections in accordance with AISC Specifications unless noted otherwise on the Drawings.

#### C. Adhesive Anchors

1. Adhesive Anchors shall be installed in strict conformance with the manufacturer's recommendations. A representative of the manufacturer must be on site when required by the ENGINEER.
2. At least 25 percent of the adhesive anchors installed shall be proof tested to 1.33 times the allowable load specified by the manufacturer, or as indicated on the Drawings.

#### D. Other Bolts

1. All dissimilar metal shall be connected with appropriate fasteners and shall be insulated with a dielectric or equal. Unless otherwise specified, where aluminum and steel members are connected together they shall be fastened with Type 316 stainless steel bolts and insulated with micarta, nylon, rubber, or equal.
2. All stainless steel bolts shall be coated with antiseize lubricant.

### 3.03 WELDING

- A. All welding shall comply with AWS Code for procedures, appearance, quality of welds, qualifications of welders and methods used in correcting welded work.
- B. Welded stud connectors shall be installed in accordance with AWS D1.1.

### 3.04 INSPECTION

- A. High strength bolting will be visually inspected in accordance with AISC "Specification for Structural Joints, using A325 or A490 Bolts". Rejected bolts shall be either replaced or retightened as required. In cases of disputed bolt installation, the bolts in question shall be checked by a calibrated wrench certified by an independent testing laboratory. The certification shall be at the CONTRACTOR's expense.
- B. Field welds will be visually inspected in accordance with AWS Codes. Inadequate welds shall be corrected or redone as required in accordance with AWS Codes.
- C. Inspection of post installed anchors shall be per requirements of the corresponding ICC ES ER.

- END OF SECTION -

## SECTION 05051 – WELDING STEEL CASING AND PLATE

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials, labor, and equipment required to provide all metal welds shown in the Drawings.
- B. The CONTRACTOR shall be aware that work will be completed within an active effluent injection wellfield and undertake appropriate precautions.

#### 1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of cost preparation.

- 1. AWS D1.1 Structural Welding Code - Steel
- 2. AWS D10.9 Specification for Qualification of Welding Procedures and Welders for Piping and Tubing
- 3. API 5L Grade B Specification for Line Pipe
- 4. API 5CT Specification for Casing and Tubing
- 5. ASTM A36 Standard Specification for Carbon Structural Steel
- 6. ASTM A53 Grade B Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- 7. ASTM A139 Grade B Standard Specification for Electric-Fusion (Arc) Welded Steel Pipe (NPS 4 and Over)
- 8. ASME Boiler and Pressure Vessel Code

#### 1.04 SUBMITTALS

- A. Submit the following items in accordance with Section 01300 entitled "Submittals":
  - 1. Welder certifications for each person who is to perform field welding. Certifications shall be from a recognized testing laboratory. The welder's qualifications shall be in conformance with Section IX, Article III of the ASME Boiler and Pressure Vessel Code. The CONTRACTOR shall provide welding certificates for all welders prior to any welding or other repair work at IW-2.
  - 2. Welding procedure specification (WPS) by a Certified Weld Inspector (CWI) for all welding.

3. CONTRACTOR will provide inspection and certification of all welds by a CWI for work associated with the wellhead, including the joining of the 18-inch liner and 24-inch casing per the Drawings.

#### 1.05 QUALITY ASSURANCE

- A. All steel welding shall be performed by welders certified in accordance with AWS D1.1. Welders shall have a 6G certification.
- B. Provide a welding procedure for each type and thickness of weld. The welding procedure shall be given to each welder performing the weld. The welding procedure shall follow the format in Annex E of AWS D1.1 with relevant information presented.

### PART 2 -- PRODUCTS

#### 2.01 STEEL

- A. All well casing and plate steel shall be new and unused. The casing shall conform to API 5L Grade B, ASTM A53 Grade B or Spiral Weld A139 Grade B. Plate steel shall be a minimum grade of ASTM A36. Casing segments shall have plain ends, beveled for welding.

#### 2.02 WELDS

- A. Electrodes for welding structural steel and all ferrous steel shall comply with AWS Code, using E70 series electrodes for shielded metal arc welding (SMAW), or F7 series electrodes for submerged arc welding (SAW).

### PART 3 -- EXECUTION

#### 3.01 MEASUREMENTS

- A. The CONTRACTOR shall verify all dimensions and review the Drawings and shall report any discrepancies to the CONSULTANT for clarification prior to starting fabrication.

#### 3.02 WELDING

- A. All welding shall comply with AWS Code for procedures, appearance, quality of welds, qualifications of welders and methods used in correcting welded work. Welder's qualifications shall be in conformance with Section IX, Article III of the ASME Boiler and Pressure Vessel Code.

#### 3.04 INSPECTION

- A. Field welds will be visually inspected in accordance with AWS Codes and tested per 1.05C of this Section. Inadequate welds shall be corrected or redone as required in accordance with AWS Codes. Concavity, undercut, cracks, or crevices will not be accepted. Excessive weld deposits, slag, spatter, and projections shall be removed by grinding.

CONTRACTOR shall correct all welding deficiencies in materials and/or workmanship at CONTRACTOR's own expense.

- END OF SECTION -

**DIVISION 9**

**FINISHES**

## SECTION 09900 - PAINTING

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all labor, tools, materials, supervision and equipment necessary to do all the work specified herein and as required for a complete installation, including surface preparation priming and painting of CONTRACTOR furnished injection well IW-2 repairs where shown on the Drawings.
- B. Section includes:
  - 1. Paint Materials
  - 2. Shop Painting
  - 3. Field Painting
    - a. Surface Preparation
    - b. Piping and Equipment Identification
    - c. Schedule of Colors

#### 1.02 GENERAL INFORMATION AND DESCRIPTION

- A. All paint for concrete and metal surfaces shall be especially adapted for use around water and shall be applied in conformance with the manufacturer's published specifications.
- B. All paint for final coats shall be fume resistant, compounded with pigments suitable for exposure to gases, especially to hydrogen sulfide and to carbon dioxide. Pigments shall be materials which do not tend to darken, discolor, or fade due to the action of sewage gases. If a paint manufacturer proposes use of paint which is not designated "fume resistant" in its literature, it shall furnish full information concerning the pigments used in this paint.
- C. Coatings used in conjunction with potable water supply systems shall have U.S. Environmental Protection Agency (EPA), National Science Foundation (NSF), and Food and Drug Administration (FDA) approval for use with potable water and shall not impart a taste or odor to the water.
- D. The term "paint", as used herein, includes emulsions, enamels, paints, stains, varnishes, sealers, cement filler, cement-latex filler and other coatings, whether used as prime, intermediate, or finish coats.
- E. All injection well casing extension work, adjacent piping and appurtenances, as indicated on the Drawings shall be painted with not less than one shop coat and field coat(s), or one prime coat and finish coat(s) of the appropriate paint.

- F. Aluminum, stainless steel, fiberglass and bronze work shall not be painted unless color coding and marking is required or otherwise specified.
- G. Ensure compatibility of total paint system for each substrate. Test shop primed equipment delivered to the site for compatibility with final paint system. Provide an acceptable barrier coat or totally remove shop applied paint system when incompatible with system specified and repaint with specified paint system.
- H. The CONTRACTOR shall obtain all permits, licenses and inspections and shall comply with all laws, codes, ordinances, rules and regulations promulgated by authorities having jurisdiction which may bear on the work. This compliance will include Federal Public Law 91-596 more commonly known as the "Occupational Safety and Health Act of 1970".

#### 1.03 MANUFACTURERS

- A. All painting materials shall be as manufactured by Carboline, Tnemec, Sherwin Williams, or equal.

#### 1.04 REFERENCE SPECIFICATION, CODES AND STANDARDS

- A. Without limiting the generality of these specifications, the Work shall conform to the applicable requirements of the following documents:

1. Association for Materials performance and Protection (NACE/SSPC)  
 SSPC - The Society for Protective Coatings Standards  
 NACE - National Association of Corrosion Engineers

- |                           |   |
|---------------------------|---|
| a. SSPC-Vis 1             | Pictorial Surface Preparation Standards for Painting Steel Structures |
| b. SSPC-SP2               | Hand Tool Cleaning  |
| c. SSPC-SP3               | Power Tool Cleaning   |
| d. SSPC-SP5 (NACE No. 1)  | White Metal Blast Cleaning  |
| e. SSPC-SP6 (NACE No. 3)  | Commercial Blast Cleaning   |
| f. SSPC-SP10 (NACE No. 2) | Near-White Metal Blast  |
| g. SSPC-SP13 (NACE No. 6) | Surface Preparation of Concrete                                       |

2. ASTM D1737 - Test Method for Elongation of Attached Organic Coatings with Cylindrical Mandrel Apparatus

3. ASTM B117 - Method of Salt Spray (Fog) Testing

4. ASTM D4060 - Test Method for Abrasion Resistance of Organic Coating by the Taber Abraser

5. ASTM D3359 - Method for Measuring Adhesion by Tape Test

#### 1.05 SUBMITTALS

- A. The CONTRACTOR shall submit paint manufacturer's data sheets and samples of each

finish and color to the ENGINEER for review, before any work is started in accordance with the section entitled "Submittals".

- B. Submitted samples of each finish and color shall be prepared so that areas of each sample indicate the appearance of the various coats. For example, where a three coat system is specified, the sample shall be divided into three areas indicating one coat only, two coats and all three coats. The ENGINEER will provide written authorization constituting a standard, as to color and finish only, for each coating system.
- C. The CONTRACTOR shall prepare a complete schedule of surfaces to be coated and shall identify the surface preparation and the paint system the CONTRACTOR proposes to use. The schedule shall contain the name of the paint manufacturer, and the name, address and telephone number of the manufacturer's representative that will inspect the work. The schedule shall be submitted to the ENGINEER for review as soon as possible following the Notice to Proceed so that the schedule may be used to identify colors and to specify shop painting systems on order for fabricated equipment.
- D. Name and detailed qualifications of the protective coating applicator or subcontractor. Qualifications shall include, but not be limited to, five (5) project references which show that the painting applicator or subcontractor has previous successful experience with the specified or comparable coating systems, a list of installations that are currently in service and documentation that applicator or subcontractor is currently a qualified applicator of the proposed coatings by the manufacturer. Include the name, address and telephone number of the owner of each installation for which the coating applicator provided the coating
- E. CERTIFICATIONS: The coating manufacturer shall submit the following certifications:
  - 1. A letter from the coating manufacturer stating that the specified material is suitable for the application.
  - 2. Inspection reports of coating manufacturer certifying that all inspections by the manufacturer as specified in 09900-1.07(B) showed satisfactory performance of the work by the coating applicator.
  - 3. A letter from the coating manufacturer certifying that the surface preparation has been properly completed.
  - 4. A letter from the coating manufacturer certifying that the coating system has been properly applied and acknowledging that their warranty is in effect.
  - 5. A sample copy of the warranty to be issued after completion of the work.
  - 6. Test reports of all testing and inspections during the work

#### 1.06 SERVICES OF MANUFACTURERS REPRESENTATIVE

- A. The CONTRACTOR shall purchase paint from an acceptable manufacturer. The manufacturer shall assign a representative to inspect the application of their product both in the shop and field. Prior to and after coating application, the manufacturer's

representative shall submit reports to the ENGINEER identifying the products used and verifying that said products were proper for the exposure and service intended and were properly applied, respectively.

- B. Services shall also include, but not be limited to, inspecting prior coatings of paint, determination of best means of surface preparation, inspection of completed work, and final inspection of painted work to be performed six months after the job is completed.

#### 1.07 MANUFACTURERS' INSTRUCTIONS

- A. The manufacturers' published instructions for use as a guide in specifying and applying the manufacturers' proposed paint shall be submitted to the ENGINEER. Paint shall not be delivered to the job before acceptance of the manufacturers' instructions is given by the ENGINEER.
- B. A manufacturer's paint will not be considered for use unless that manufacturer's published instructions meet the requirements described hereinbelow.
- C. The instructions must have been written and published by the manufacturer for the purpose and with the intent of giving complete instruction for the use and application of the proposed paint in the locality and for the conditions for which the paint is specified or shown to be applied under this Contract.
- D. All limitations, precautions, and requirements that may adversely affect the paint; that may cause unsatisfactory results after the painting application; or that may cause the paint not to serve the purpose for which it was intended, that is, to protect the covered material from corrosion, shall be clearly and completely stated in the instructions. These limitations and requirements shall, if they exist, include, but not be limited to the following list:
  - 1. Methods of application
  - 2. Number of coats
  - 3. Thickness of each coat
  - 4. Total thickness
  - 5. Drying time of each coat, including primer
  - 6. Primer required to be used
  - 7. Primers not permitted
  - 8. Use of a primer
  - 9. Thinner and use of thinner
  - 10. Temperature and relative humidity limitations during application and after application

11. Time allowed between coats
12. Protection from sun
13. Physical properties of paint including solids content and ingredient analysis
14. Surface preparation
15. Touch up requirements and limitations

#### 1.08 QUALITY ASSURANCE

- A. The CONTRACTOR shall give the ENGINEER a minimum of three days advance notice of the start of any field surface preparation work of coating application work.
- B. All such work shall be performed only in the presence of the ENGINEER, unless the ENGINEER has specifically allowed the performance of such work in the ENGINEER's absence.
- C. Inspection by the ENGINEER, or the waiver of inspection of any particular portion of the work, shall not relieve the CONTRACTOR of their responsibility to perform the work in accordance with these Specifications.
- D. Where protective coatings are to be performed by a subcontractor, said subcontractor must provide five references which show that the painting subcontractor has previous successful experience with the specified or comparable coating systems. Include the name, address, and the telephone number for the CITY of each installation for which the painting subcontractor provided the protective coating.

#### 1.09 SAFETY AND HEALTH REQUIREMENTS

- A. In accordance with requirements of OSHA Safety and Health Standards for Construction (29CFR1926) and the applicable requirements of regulatory agencies having jurisdiction, as well as manufacturer's printed instructions, appropriate technical bulletins, manuals, and material safety data sheets, the CONTRACTOR shall provide and require use of personnel protective and safety equipment for persons working in or about the project site.
- B. Respirators shall be worn by persons engaged or assisting in spray painting. The CONTRACTOR shall provide ventilating equipment and all necessary safety equipment for the protection of the experienced workers and the work.
- C. All paint shall comply with all requirements of the Air Pollution Regulatory Acts concerning the application and formulation of paints and coatings for an area in which the paints are applied. Specifically, paints shall be reformulated as required to meet the local, State and Federal requirements.

#### 1.10 QUALITY WORK PERFORMED

- A. The CONTRACTOR shall be responsible for the cleanliness of their painting operations

and shall use covers and masking tape to protect the work whenever such covering is necessary, or if so requested by the CITY. Any unwanted paint shall be carefully removed without damage to any finished paint or surface. If damage does occur, the entire surface, adjacent to and including the damaged area, shall be repainted without visible lapmarks and without additional cost to the CITY.

- B. Painting found defective shall be scraped or sandblasted off and repainted as the CITY may direct. Before final acceptance of the work, damaged surfaces of paint shall be cleaned and repainted as directed by the CITY.

1.11 ADDITIONAL PAINT

- A. At the end of the project, the CONTRACTOR shall turn over to the CITY one five-gallon can of each type and color of paint, primer, thinner or other coating used in the field painting. If the manufacturer packages the material concerned in gallon cans, then it shall be delivered in unopened labeled cans as it comes from the factory. If the manufacturer does not package the material in gallon cans, and in the case of special colors, the materials shall be delivered in new gallon containers, properly closed with typed labels indicating brand, type, color, etc. The manufacturer's literature describing the materials and giving directions for their use shall be furnished in three bound copies. A type-written inventory list shall be furnished at the time of delivery.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Table 09900-1 depicts the coatings referenced in Article 3.07, "Paint Schedule". Table 09900-1 lists Tnemec coating products as a reference. Equivalent products by the manufacturers listed in Article 1.03 of this Section may be submitted for review.

**Table 09900-1  
Product Listing**

Reference Number	Description	Manufacturers Reference TNE MEC
104	Polyamide Epoxy Primer	Series 66-1211 Hi-Build Epoxoline Primer
105	Polyamide Epoxy Topcoat	Series 66 - Color Hi-Build Epoxoline Topcoat
110	Aliphatic Acrylic Polyurethane	Series 73 - Color Endura-Shield

No lead containing protective coating materials may be used on this project.

PART 3 -- EXECUTION

3.01 SHIPPING, HANDLING AND STORAGE

- A. All painting materials shall be brought to the job site in the original sealed labeled containers of the paint manufacturer and shall be subject to inspection by the ENGINEER. Packages shall not be opened until they are inspected by the ENGINEER and required for use. Where thinning is necessary, only the product of the manufacturer furnishing the paint shall be used. All such thinning shall be done strictly in accordance with the manufacturer's instructions, and with the full knowledge of the ENGINEER.
- B. Materials and their storage shall be in full compliance with the requirements of pertinent codes and fire regulations. All painting materials shall be stored in a clean, dry, well-ventilated place protected from sparks, flame, direct rays of the sun or from excessive heat. Receptacles shall be placed outside buildings for paint gates and containers. Paint waste shall not be disposed of in plumbing fixtures, process drains or other plant systems or process units.

### 3.02 PREPARATION OF MATERIALS

- A. Mechanical mixers, capable of thoroughly mixing the pigment and vehicle together, shall mix the paint prior to use where required by manufacturer's instructions; thorough hand mixing will be allowed for small amounts up to five gallons.
- B. Pressure pots shall be equipped with mechanical mixers to keep the pigment in suspension, when required by manufacturer's instructions. Otherwise, intermittent hand mixing shall be done to assure that no separation occurs. All mixing shall be done in accordance with SSPC Vol. 1, Chapter 4, "Practical Aspects, Use and Application of Paints" and/or with manufacturer's recommendations.
- C. Catalysts or thinners shall be as recommended by the manufacturer and shall be added or discarded strictly in accordance with the manufacturer's instruction.

### 3.03 SURFACE PREPARATION

#### A. General

1. Surfaces to be painted shall be clean and dry, and free of dust, rust, scale and all foreign matter. No solvent cleaning, power or hand tool cleaning shall be permitted unless acceptable to the ENGINEER or specified herein.
2. Threaded portions of valve and gate stems, machined surfaces which are limited for sliding contact, surfaces which are to be assembled against gaskets, surfaces or shafting on which sprockets are to fit, or which are intended to fit into bearings, machined surfaces of bronze trim on slide gates and similar surfaces shall be masked off to protect them from the sandblasting of adjacent surfaces. Cadmium-plated or galvanized items shall not be sandblasted unless hereinafter specified, except that cadmium-plated, zinc-plated, or sherardized fasteners used in assembly of equipment to the sandblasted shall be sandblasted in the same manner as the unprotected metal. All installed equipment, mechanical drives, and adjacent painted equipment shall be protected from sandblasting. Protection shall

prevent any sand or dust from entering the mechanical drive units or equipment where damage could be caused.

3. Hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place prior to cleaning and painting, and not intended to be painted, shall be protected or removed during painting operations and repositioned upon completion of painting operations.
4. Examine surfaces to be coated to determine that surfaces are suitable for specified surface preparation and painting. Report to ENGINEER surfaces found to be unsuitable in writing. Do not start surface preparation until unsuitable surfaces have been corrected. Starting surface preparation precludes subsequent claim that such surfaces were unsuitable for the specified surface preparation or painting.
5. Surface preparation shall be in accordance with specifications and manufacturer's recommendations. Provide additional surface preparation, and fill coats where manufacturer recommends additional surface preparation, in addition to requirements of specification.
6. Touch-up shop or field applied coatings damaged by surface preparation or any other activity, with the same shop or field applied coating; even to the extent of applying an entire coat when required to correct damage prior to application of the next coating. Touch-up coats are in addition to the specified applied systems, and not considered a field coat.
7. Protect motors and other equipment during blasting operation to ensure blasting material is not blown into motors or other equipment. Inspect motors and other equipment after blasting operations and certify that no damage occurred, or where damage occurred, the proper remedial action was taken
8. Sand from sandblasting shall be thoroughly removed, using a vacuum cleaner if necessary. No surface which has been sandblasted shall be painted until inspected by the ENGINEER.
9. Field paint shop painted equipment in compliance with Color Coding and as approved by ENGINEER.

#### B. Metal Surfaces

1. Conform to current SSPC Specifications for metal surface preparation. Use SSPC-Vis-1 pictorial standards or NACE visual standards TM-01-70 or TM-01-75 to determine cleanliness of abrasive blast cleaned steel.

2. Perform blast cleaning operations for metal when following conditions exist:
  - a. Moisture is not present on the surface.
  - b. Relative humidity is below 80%.
  - c. Ambient and surface temperatures are 5°F or greater than the dew point temperature.
  - d. Painting or drying of paint is not being performed in the area.
  - e. Equipment is in good operating condition.
  - f. Proper ventilation, illumination, and other safety procedures and equipment are being provided and followed.
3. All ferrous metal surfaces not required to be galvanized shall be cleaned of all oil grease, dirt, rust and tight and loose mill scale by blasting in accordance with the following: SSPC-SP-5 White Metal Blast Cleaning and comply with the visual standard NACE No. 1, for shop prepared and shop primed metal to be submerged or in a corrosive environment, SSPC-SP10 Near White Metal Blast Cleaning, and comply with the visual standard NACE No. 2 for field prepared metal to be submerged or in a corrosive environment, SSPC-SP6 and comply with the visual standard NACE No. 3 for metal in all other locations. Pickling, complying with SSPC-SP-8, may be substituted for Near White Blast in areas as determined by the ENGINEER. Priming shall follow sandblasting before any evidence of corrosion occurs, before nightfall and before any moisture is on the surface.
4. Field surface preparation of small, isolated areas such as field welds, repair of scratches, abrasions or other marks to the shop prime or finish shall be cleaned by power tools in accordance with SSPC-SP-3, or in difficult and otherwise inaccessible areas by hand cleaning in accordance with SSPC-SP-2 and spot primed.
5. All coated surfaces shall be cleaned prior to application of successive coats. All non-ferrous metals not to be coated shall be cleaned. This cleaning shall be done in accordance with SSPC-SP-1, Solvent Cleaning.
6. All shop-coated surfaces shall be protected from damage and corrosion before and after installation by treating damaged areas immediately upon detection. Abraded or corroded spots on shop-coated surfaces shall be prepared in accordance with

SSPC-SP-2, Hand Tool Cleaning and then touched up with the same materials as the shop coat.

7. All shop coated surfaces which are faded, discolored, or which require more than minor touch-up, in the opinion of the ENGINEER, shall be repainted. Cut edges of galvanized sheets, electrical conduit, and metal pipe sleeves, not to be finish painted, shall be cleaned in accordance with SSPC-SP-1, Solvent Cleaning and primed with zinc dust-zinc oxide metal primer.
8. Prime cleaned metals immediately after cleaning to prevent rusting.
9. Clean rusted metals down to bright metal by sandblasting and immediately field primed.

#### C. Exposed Pipe

1. Bituminous coated pipe shall not be used in exposed locations. Pipe which shall be exposed after project completion shall be primed in accordance with the requirements herein. Any bituminous coated ferrous pipe which is inadvertently installed in exposed locations shall be sandblasted to SSPC-SP-5 White Metal before priming and painting.
2. After installation and prior to finish painting, all exterior, exposed flanged joints shall have the gap between adjoining flanges and gaps between the pipe wall and threaded-on flanges sealed with a single component Thiokol caulking to prevent rust stains.

#### D. Existing Painted Surfaces

1. Totally remove existing paint when: surface is to be submerged in a severe environment, paint is less than 75% intact, brittle, eroded or has underfilm rusting.
2. Surfaces which are greater than 75% intact require removal of failed paints and then spot primed. Spot priming is in addition to coats specified.
3. Remove surface contamination such as oil, grease, loose paint, mill scale, dirt, foreign matter, rust, mold, mildew, mortar, efflorescence, and sealers.
4. Clean and dull glossy surfaces prior to painting in accordance with the manufacturer's recommendations.

5. Check existing paints for compatibility with new paint system. If incompatible, totally remove existing paint system or apply a barrier coat recommended by the paint manufacturer. Remove existing paints of undetermined origin. Prepare a test patch of approximately 3 square feet over existing paint. Allow test patch to dry thoroughly and test for adhesion. If proper adhesion is not achieved remove existing paint and repaint.

### 3.04 SHOP PAINTING

- A. All fabricated steel work and equipment shall receive at the factory at least one shop coat of prime paint compatible with the paint system required by these specifications. Surface preparation prior to shop painting shall be as specified. Finish coats may be applied in the shop if approved by the ENGINEER. All shop painted items shall be properly packaged and stored until they are incorporated in the work. Any painted surfaces that are damaged during handling, transporting, storage, or installation shall be cleaned, scraped, and patched before field painting begins so that the work shall be equal to the original painting received at the shop. Equipment or steel work that is to be assembled on the site shall likewise receive a minimum of one shop coat of paint at the factory. Surfaces of exposed members that will be inaccessible after erection shall be prepared and painted before erection.
- B. The CONTRACTOR shall specify the shop paints to be applied when ordering equipment in order to assure compatibility of shop paints with field paints. The paints and surface preparation used for shop coating shall be identified on shop drawings submitted to the ENGINEER for review. Shop paint shop drawings will not be reviewed until the final project paint system has been submitted by the CONTRACTOR and reviewed by the ENGINEER.
- C. Shop finish coats may be the standard finish as ordinary applied by the manufacturer if it can be demonstrated to the ENGINEER that the paint system is equal to and compatible with the paint system specified.

### 3.05 PAINT SCHEDULE

- A. General: The CONTRACTOR shall adhere to this paint schedule, providing those paints named or equal. DFT shall mean the total minimum dry film thickness per application measured in mils.
- B. Products are referenced by numbers listed in Article 2.01, "Materials," and listed in Table 09900-1.
- B. Metal Surfaces, Exterior (Atmospheric) Exposure
  1. Metal surfaces exposed to the atmosphere that do not come into contact with wastewater or corrosive atmospheres shall be painted as described below:
    - a. Welded steel shapes including the existing 24-inch OD injection well steel casings.
    - b. The upper and lower limits of painting for injection well IW-2 are from the slip on flange below the 24-inch diameter ball valve to the top of the

concrete slab.

- c. The casings shall be sand-blasted as identified in Article 3.03 "Surface Preparation".

**Ferrous Metal**

<u>Application</u>	<u>No.</u>	<u>Description</u>	<u>DFT</u>
First -1 coat	104	Hi-Build Epoxoline II Primer	3.0 - 5.0
Second - 1 coat	105	Hi-Build Epoxoline II	2.0 - 3.0
Finish - 1 coat	110	Endura Shield III	<u>2.0 - 3.0</u>
		Min. Total	9.0 Mils

3.06 FIELD PAINTING

- A. Application: All paint shall be applied by experienced painters with top quality, properly styled brushes, rollers or other applicators reviewed by the ENGINEER and the paint manufacturers.

1. Paint shall be applied without runs, sags, thin spots, or unacceptable marks. Paints shall be applied at the rate specified by the manufacturer to achieve the minimum dry mil thickness required. Additional coats of paint shall be applied, if necessary, to obtain thickness specified. Work which shows carelessness, lack of skill, or is defective in the opinion of the ENGINEER, shall be corrected at the expense of the CONTRACTOR.
2. Paint shall be applied with spraying equipment only on those surfaces designated by the ENGINEER. If the material has thickened or must be diluted for application by spray gun, each coat shall be built up to the same film thickness achieved with undiluted brushed-on material. Where thinning is necessary, only the products of the particular manufacturer furnishing the paint shall be used; and all such thinning shall be done in strict accordance with the manufacturer's instructions, as well as with the full knowledge of the ENGINEER.
3. Surfaces not accessible to brushes or rollers may be painted by spray by dauber or sheepskins and paint mitt. If any of these methods is to be used, it shall be done in strict accordance with the manufacturer's instruction, as well as with the full knowledge of the ENGINEER.
4. Special attention shall be given to nuts, bolts, edges, angles, flanges, etc., where insufficient film thicknesses are likely. Stripe paint prior to applying prime coat. Stripe painting shall be in addition to coats specified.
5. Perform thinning in strict accordance with the manufacturer's instructions, and with the full knowledge and approval of the ENGINEER and paint manufacturer.

- B. Drying Time: A minimum of twenty-four hours drying time shall elapse between application of any two coats of paint on a particular surface unless shorter time periods are a requirement of the manufacturer or specified herein. Longer drying times shall be

required for abnormal conditions as defined by the manufacturer.

- C. Weather Restrictions: No painting whatsoever shall be accomplished in rainy or excessively damp weather when the relative humidity exceeds 85 percent, or when the general air temperature cannot be maintained at 50 degree Fahrenheit or above throughout the entire drying period. No paint shall be applied when it is expected that the relative humidity will exceed 85 percent or that the air temperature will drop below 50 degree Fahrenheit within 18 hours after the application of the paint. Dew or moisture condensation should be anticipated; and if such conditions are prevalent, painting shall be delayed until midmorning to be certain the surfaces are dry. The day's painting shall be completed well in advance of the probable time-of-day when condensation will occur.
- D. Inspection of Surfaces
1. Surface preparation and every field coat of priming and finishing paint shall be inspected by the ENGINEER or his authorized representative before the succeeding coat is applied. The Contractor shall follow a system of tinting successive paint coats so that no two coats for a given surface are exactly the same color. Areas to receive black protective coatings shall in such cases be tick-marked with white or actually gauged as to thickness when finished.
  2. Before application of the prime coat and each succeeding coat, any defects or deficiencies in the prime coat or succeeding coat shall be corrected by the Contractor before application of any subsequent coating.
  3. Samples of surface preparation and of painting systems shall be furnished by the Contractor to be used as a standard throughout the job, unless omitted by the ENGINEER.
  4. When any appreciable time has elapsed between coatings, previously coated areas shall be carefully inspected by the ENGINEER, and where, in his opinion, surfaces are damaged or contaminated, they shall be cleaned and recoated at the Contractor's expense. Recoating times of manufacturer's printed instructions shall be adhered to.
  5. Coating thickness shall be verified by the use of a dry film thickness digital gauge. Gauge shall be Elcometer 456 or equal and shall be properly calibrated. Coating thickness on non-metal surfaces shall be verified by the use of an ultrasonic gauge. Ultrasonic gauge shall be Positector 200 or equal. Gauges shall include the entire range of coating thicknesses required in this section.
  6. The Contractor shall provide free of charge to the ENGINEER two new digital dry film gauges and two wet film gauges to be used to inspect coating by ENGINEER and Contractor. One gauge may be used by Contractor and returned each day to the ENGINEER. ENGINEER will return gauges to Contractor at completion of job.
  7. Coatings shall pass a holiday detector test.

8. Determination of Film Thickness: Randomly selected areas, each of at least 107.5 contiguous square feet, totaling at least 5% of the entire control area shall be tested. Within this area, at least 5 squares, each of 7.75 square inches, shall be randomly selected. Three readings shall be taken in each square, from which the mean film thickness shall be calculated. No more than 20 percent of the mean film thickness measurements shall be below the specified thickness. No single measurement shall be below 80 percent of the specified film thickness. Total dry film thickness greater than twice the specified film thickness shall not be acceptable. Areas where the measured dry film thickness exceeds twice that specified shall be completely redone unless otherwise approved by the ENGINEER. When measured dry film thickness is less than that specified additional coats shall be applied as required.
9. Holiday Testing: Holiday test painted ferrous metal surfaces which will be submerged in water or other liquids, or surfaces which are enclosed in a vapor space in such structures. Mark areas which contain holidays. Repair or repaint in accordance with paint manufacturer's printed instructions and retest.
  - a. Dry Film Thickness Exceeding 20 Mils: For surfaces having a total dry film thickness exceeding 20 mils: Pulse-type holiday detector such as Tinker & Razor Model AP-W, D.E. Stearns Co. Model 14/20, shall be used. The unit shall be adjusted to operate at the voltage required to cause a spark jump across an air gap equal to twice the specified coating thickness.
  - b. Dry Film Thickness of 20 Mils or Less: For surfaces having a total dry film thickness of 20 mils or less: Tinker & Razor Model M1 non-destructive type holiday detector, K-D Bird Dog, shall be used. The unit shall operate at less than 75-volts. For thicknesses between 10 and 20 mils, a non-sudsing type wetting agent, such as Kodak Photo-Flow, shall be added to the water prior to wetting the detector sponge.
10. Paint manufacturer or his representative shall provide their services as required by the ENGINEER. Services shall include, but not be limited to, inspecting existing paint, determination of best means of surface preparation, inspection of completed work, and final inspection of painted work 11 months after the job is completed.

#### E. Safety

Respirators shall be worn by persons engaged or assisting in spray painting. The Contractor shall provide ventilating equipment and all necessary safety equipment for the protection of the workmen and the Work.

#### F. Quality Work

The Contractor shall be responsible for the cleanliness of the painting operations and shall use covers and masking tape to protect the Work whenever such covering is necessary, or if so requested by the CITY. Any unwanted paint shall be carefully removed without damage to any finished paint or surface. If damage does occur, the entire surface, adjacent to and including the damaged area, shall be repainted without visible lap marks and without additional cost to the CITY.

- G. Painting found defective shall be scraped or sandblasted off and repainted as the ENGINEER may direct. Before final acceptance of the Work, damaged surfaces of paint shall be cleaned and repainted as directed by the ENGINEER.
- H. Take all necessary precautions to contain dispersion of sandblasting debris and paint to the limits of the work. Take into account the effect of wind and other factors which may cause dispersion of the sandblasting debris and paint. Suspend painting operations when sanding debris or paint cannot be properly confined. Assume all responsibilities and cost associated with damage to adjacent structures, vehicles, or surfaces caused by the surface preparation and painting operations.

### 3.07 SCHEDULE OF COLORS

- A. Colors shall match existing IW-2 piping colors. Color selection shall be confirmed by the CITY during shop drawing review. No variation shall be made in colors without the CITY'S approval. Color names and/or numbers shall be identified according to the appropriate color chart issued by the manufacturer of the product in question.

### 3.08 CLEANING

- A. The CONTRACTOR shall, at all times, protect areas where painting is being done, floors, materials of other crafts, equipment, vehicles, fixtures, and finished surfaces adjacent to paint work. Cover all electrical wall plates, surface hardware, nameplates, gauge glasses, etc., before start of painting work.
- B. At completion of the work, remove all paint where spilled, splashed, splattered, sprayed or smeared on all surfaces, including glass, light fixtures, hardware, equipment, painted and unpainted surfaces.
- C. The buildings and all other work areas shall, at all times, be kept free from accumulation of waste material and rubbish caused by the work. At the completion of the painting, all tools, equipment, scaffolding, surplus materials, and all rubbish around and inside the buildings shall be removed and the work left broom clean unless otherwise specified.

- END OF SECTION -

**DIVISION 13**  
**SPECIAL CONSTRUCTION**

## SECTION 13193 - WELL REPAIR

### PART 1 -- GENERAL

#### 1.01 SCOPE

- A. The work described in this section of the Specifications is for the repair and testing of Injection Well No. 2 (IW-2) at the SRWWTP. This work also includes removal and reinstallation of existing 24-in piping and installation of an owner-furnished 24-in ball valve. CONTRACTOR shall survey the existing piping centerline and flange elevations prior to dismantling the wellhead and commencing repair work. CONTRACTOR shall coordinate bolt pattern for new wellhead flange with owner-furnished 24-in ball valve and existing piping.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals.
- B. Division 3 – Concrete
- C. Section 13197 – Mechanical Integrity Testing.
- D. Division 15 – Piping and Valves.

#### 1.02 SUBMITTALS

- A. The CONTRACTOR shall submit shop drawings, mill certificates and other information as specified herein to the ENGINEER for review in accordance with Section entitled "Submittals". CONTRACTOR shall submit cement mix designs and proposed additives for review. CONTRACTOR shall submit clearly drawn downhole sketches of downhole assemblies indicating diameters and laying lengths prior to lowering them into the hole.

#### 1.03 OUTLINE SPECIFICATION OF WELL REPAIR

- A. The Work includes the replacement of the upper portion of the existing 24-inch diameter steel casing and performing mechanical integrity testing as identified in Section 13197.
- B. Well Repair:
  1. The CONTRACTOR shall keep the artesian pressure of the well under control at all times and remove the wellhead and instruments.
  2. Remove concrete well pad and excavate to expose surface (62-inch, 50-inch OD) and intermediate (42-inch OD and 34-inch OD) casings sufficient to allow cutting of the final (24-inch OD casing). Cutting and removal of all concentric casings and cement sheaths below the concrete pad may be necessary to facilitate removal and welding of the 24-inch casing. CONTRACTOR should expect to encounter groundwater approximately three feet below grade and provide the means and methods necessary to perform the Work.

3. Cut and remove 24-inch casing to the first welded joint, or to additional depth as required to facilitate welding work. Remove existing grout as required to expose 24-inch casing.
  4. Grind and bevel top edge of the existing 24-inch casing smooth and level as required to receive replacement casing joint for welding. Bevel the edge of the new 24-inch steel casing extension joint in preparation for welding.
  5. Weld new 24-inch seamless carbon steel casing extension with flange to the existing 24-inch carbon steel casing that has been prepared for welding.
- C. Pressure Test: Following replacement of the surface section of the 24-inch casing, and prior to installation of ports, valves, and instrumentation, pressure testing shall be conducted in the uppermost 30 feet of IW-2, as outlined below.
1. The CONTRACTOR shall supply a pressure gauge with a calibrated range from 0 to 300 psi in one psi increments, with an accuracy of plus or minus 0.25 percent. The pressure gauge shall be located in an easily accessible and visible location, and at a height for those observing and witnessing the testing as acceptable to the ENGINEER.
  2. The CONTRACTOR shall submit an original written verification of the pressure gauge calibration within the last sixty days prior to the commencement of the pressure test. The serial numbers shall be checked to verify that the number on the certification matches the number on the gauge. A copy of the calibration certificate shall be kept onsite at all times during testing and shall be presented to the FDEP representative prior to testing in the field. The pressure gauge calibration certificate shall be provided to the ENGINEER at least seven days prior to the start of the test.
  3. The CONTRACTOR shall be required to keep the artesian pressure of the well under control at all times by use of salt as weight material and other equipment as necessary.
  4. An inflatable packer shall be set at a depth located below the upper-most joint (30 ft bpl) of the 24-inch diameter casing.
  5. The casing shall be filled with water and placed under a pressure of at least 180 pounds per square inch (psi) but not more than 190 psi. A maximum pressure change of five percent (5%) is allowed over a sixty-minute test period. The pressure shall be recorded every five minutes, at a minimum.
  6. If a pressure change greater than five percent occurs following multiple resets and troubleshooting, the test will be abandoned.
  7. If the pressure test is abandoned, then the well shall be shut in; CONTRACTOR shall install wellhead piping and rebuild the concrete pad and install ports, in accordance with the Drawings.
8. Upon successful completion of a pressure test, CONTRACTOR shall proceed in accordance with Section 13197; CONTRACTOR shall install wellhead piping and rebuild the concrete pad and pipe supports, and install ports, in accordance with the Drawings; reinstall instrumentation.

#### 1.05 WATER SUPPLY

- A. The CONTRACTOR shall provide water for domestic consumption and construction needs at the site as specified in Division 1 "General Requirements." Temporary equipment and pipe routing shall be located to minimize impact to wastewater treatment plant operation and maintenance, and to site access and shall be approved in advance by the City. The CONTRACTOR shall provide a shop drawing submittal for these temporary systems for review.

#### 1.06 DAILY LOG

- A. The CONTRACTOR shall maintain a detailed daily log of the CONTRACTOR's operations. The logs shall give a complete description of the activities performed, quantities and sizes of materials installed. The daily log shall be submitted to the ENGINEER by email on a daily basis.
- B. The CONTRACTOR shall keep an accurate record, as assembled, on the length and size of the individual piece of pipe installed. A copy of this record shall be transmitted to the ENGINEER.

#### 1.07 RECORD DRAWINGS

- A. Upon completion of the work the CONTRACTOR shall supply the ENGINEER with a reproducible record drawing of the Work. The drawings shall show hole and casing diameters, thicknesses and depths and other information that may be required by the ENGINEER and regulatory agencies.

#### 1.08 REMEDIAL WORK

- A. If remedial work proves to be necessary to make a well acceptable and come within the governing regulations and/or Contract Documents because of accident, loss of tools, defective material or for any other cause, the CONTRACTOR shall propose a method of correcting the problem, in writing. Suggested methods shall be reviewed and accepted by the ENGINEER before work proceeds. Such work shall be performed at no additional cost to the Owner and it shall not extend the length of the Contract. The CONTRACTOR is notified that all requirements of the Contract Documents shall be met, including hole straightness and setting of casings to the points designated by the ENGINEER.

### PART 2 -- PRODUCTS

#### 2.01 CASING

- A. The 24-inch diameter inner casing shall be new, unused seamless steel, 0.500-inch wall thickness, and shall conform to either API 5L Grade B or ASTM A 53 Grade B.

## PART 3 -- EXECUTION

### 3.01 WELDING

- A. Prior to commencing repair of IW-2, the CONTRACTOR shall provide a Work Plan acceptable to the ENGINEER. The Work Plan shall include all activities necessary to repair the well casing and the durations of each, a list of all materials and equipment needed to perform the repair, a copy of the approved well repair shop drawing, application method and salt quantity for killing the well, cutting below the existing first welded joint, preparation of the casing to receive the casing extension, preparation of the casing extension, confirmation of all field measurements needed and application method and salt quantity for killing the well during the repair should the well come alive.
- B. The CONTRACTOR shall use certified welders on all welding operations. CONTRACTOR shall pay for all testing requirements prior to acceptance of any welder. Welder's qualifications shall be in conformance with Section IX, Article III of the ASME Boiler and Pressure Vessel Code.
- C. The CONTRACTOR shall submit a weld procedure specification (WPS) by a Certified Weld Inspector (CWI).
- D. The CONTRACTOR shall provide current welding certificates for all welders prior to any welding.
- E. CONTRACTOR shall provide inspection and certification of all welds by a CWI.
- F. The CONTRACTOR shall correct all welding deficiencies in materials and/or workmanship at the CONTRACTOR's own expense.

### 3.02 WELLHEAD COMPLETION

- A. Upon successful completion of the MIT, the CONTRACTOR shall grout the annular space around the 24-inch OD casing to surface, fill and compact excavated area, rebuild the pad, install ports, install pipe supports, reconnect 24-inch wellhead piping, and reinstall instruments, in accordance with the Drawings.

### 3.03 SITE RESTORATION

- A. Site rehabilitation includes but is not limited to painting piping disturbed during the Work, removal of temporary facilities, repairs of sprinkler systems, and resodding (with Argentine Bahía) and rolling disturbed grassed areas. The CONTRACTOR shall repair any damage caused by the CONTRACTOR.

- END OF SECTION -

## SECTION 13197 – MECHANICAL INTEGRITY TESTING

### PART 1 – GENERAL

#### 1.01 SCOPE

- A. A partial mechanical integrity test (MIT) shall be performed on Injection Well No. 2 (IW-2) after the completion of the repair at the SRWWTP. This is an operating wastewater treatment plant and the testing shall be coordinated with plant operations. This Section identifies procedures to be implemented by the CONTRACTOR to perform these services. Time is of the essence in completing this program. No unreasonable delays will be tolerated in beginning or completing this program.
- B. Unless otherwise stated, the CONTRACTOR shall provide all labor, equipment, materials, tools, and utilities necessary to complete all Work described in these Contract Documents. The partial MIT generally consists of a downhole video surveys, XY caliper logs, and casing pressure tests. All surveys and logs shall be performed by a qualified geophysical logging company.
- C. At the completion of the procedures, the CONTRACTOR shall remove all equipment used for the Work, return the wells to service, restore any damage to facilities and leave the site in a condition acceptable to the CITY.
- D. The well has a 24-inch diameter final casing installed to a depth of approximately 2,880 feet below pad level (bpl) and a nominal 24-inch diameter open hole to approximately 3,499 feet bpl.

#### 1.02 SCHEDULE

- A. Once the CONTRACTOR mobilizes equipment for the MIT, the CONTRACTOR shall test the well without demobilizing. Scheduling is identified to minimize impact to plant operations. The CITY reserves the right to move up the scheduled test dates.
- B. The video survey shall be completed prior to the pressure test.
- C. The CONTRACTOR shall conduct a preliminary pressure test at least one day prior to an FDEP witnessed test. If the preliminary test is scheduled to be performed the day before the witnessed test, it must be successfully completed by 4:00 PM so that confirmation of the test can be given to the parties witnessing the test.

#### 1.03 SCHEDULING TESTS

- A. The CONTRACTOR shall submit its schedule and ongoing updates to the ENGINEER so that the ENGINEER may make the required 7-day notifications to FDEP prior to any testing. The start of the pressure test shall only occur Monday through Friday.
- B. The CONTRACTOR shall perform the components of the partial MIT in the following order: video survey, XY caliper log, and pressure test

#### 1.04 HOURS OF OPERATION

- A. Hours of all normal operations shall be limited to 7 A.M. to 7 P.M., Monday through Friday excluding holidays, unless otherwise authorized by the ENGINEER.

#### 1.05 REQUIREMENTS

- A. Work is to be performed by a Water Well Contractor (CONTRACTOR) licensed in the State of Florida. The CONTRACTOR shall be regularly engaged in performing this type of work on Class I deep injection wells in Florida. At a minimum, the CONTRACTOR shall have performed five mechanical integrity tests within the last five years (from the date of the opening of bids). Testing shall be performed in accordance with Chapter 62-528 of the Florida Administrative Code (FAC).

#### 1.06 WATER SUPPLY

- A. Potable water is available at the site (e.g., hydrants, etc.). If a temporary connection is made to a potable water system on-site (e.g., a fire hydrant), the CONTRACTOR must install a backflow prevention device and a meter and obtain approval of the connection from the CITY. The CONTRACTOR shall provide temporary piping for the metering and use of potable water. The cost of the water for the testing will not be charged to the CONTRACTOR. Reuse water is also available for testing. For reuse water, the CONTRACTOR must install a backflow prevention device and obtain approval of the connection from the CITY.

#### 1.07 DAILY LOG

- A. A detailed daily log shall be maintained by the CONTRACTOR during the testing of the well. The log shall give complete descriptions of the depth and sizes of any equipment utilized in the operations, and other such pertinent data. The daily log shall be maintained on-site and available for inspection by any authorized agency representative and the ENGINEER at all times. A copy of the logs shall be submitted to the ENGINEER immediately after the completion of testing at the well.

#### 1.08 EQUIPMENT REQUIREMENTS

- A. Equipment and materials used during the performance of the Work provided by the CONTRACTOR shall be in first-class working order and condition. The equipment shall have the minimum capabilities necessary to do the described Work. No unnecessary delays or Work stoppages will be tolerated because of equipment failure. Equipment failure will not be considered as a valid reason for extending the length of the contract. The CONTRACTOR shall be held responsible for damage to the wells due to any cause including, but not limited to, negligence, faulty operation, or equipment failure.

#### 1.09 COMPETENT WORKERS

- A. The CONTRACTOR shall employ only competent workers expert in the performance of the type of Work required in these Specifications. The crew shall be under the direct supervision of an experienced driller, and the CONTRACTOR shall provide the services of a drilling superintendent who shall be available to the job, when requested. The crew and superintendent shall be in the employ of the CONTRACTOR.

## 1.10 REMEDIAL WORK

- A. If remedial work on the injection wells becomes necessary because of accident, loss of tools, defective material, or for any other cause related to its Work, the CONTRACTOR shall propose a method of correcting the problem, in writing. Suggested methods shall be reviewed and acceptable to the ENGINEER before Work proceeds. The CONTRACTOR shall be responsible for all remedial work resulting from its activities.

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

### 3.01 OPERATING REQUIREMENTS

- A. It is essential that any salty or brackish water produced at the wellhead during operations is prevented from contaminating the shallow aquifer. The well Work shall be accomplished without any uncontrolled well-flowing conditions. The CONTRACTOR shall take all necessary steps to prevent accidental spillage from occurring. If a spill does occur, the CONTRACTOR shall be responsible for all remedial activities necessary to the satisfaction of the CITY, the ENGINEER and the regulatory agencies.
- B. All Work on the well shall be coordinated with the plant superintendent. The CITY has to maintain operation of the SRWWTP, and the schedule may be interrupted by the CITY if necessary.

### 3.02 VIDEO SURVEY

- A. A video survey shall be performed on the entire depth of the well, from the top of the 24-inch-diameter injection casing to the bottom of the open hole, using the following procedure.
  1. The CONTRACTOR shall have the survey performed by a qualified geophysical logging service company using equipment capable of surveying and recording to the bottom of the open hole. The CONTRACTOR may use its own equipment providing it is capable of surveying as required and shall furnish proof of the capability of the equipment. Survey shall be recorded in color.
  2. The CONTRACTOR shall pump into the injection well clean, fresh water as necessary but no less than 500 gpm and at least 5 well volumes in order to assure that the borehole fluid is of sufficient clarity to produce a clear and sharp video survey that is acceptable to the ENGINEER.
  3. The CONTRACTOR shall be required to keep the artesian pressure of the well under control at all times by use of a stripper head and other equipment necessary.
  4. The video camera shall be centralized within the well and be positioned to record viewing downhole with the ability to turn the camera lens 90 degrees and rotate to obtain a side view at desired depths. The side views shall be recorded at the casing seat and other locations requested by the ENGINEER during the video recording.

### 3.03 Caliper Log

- A. An initial XY caliper log will be performed on the entire depth of the well, from the top of the injection casing to the bottom of the open hole. Subsequent caliper logs shall be at the CONTRACTOR's expense and will be performed to the bottom of the 24-inch OD casing.

### 3.04 Casing Brushing

- A. The injection well has exhibited pronounced, hard, scale buildup on the interior of the 24- inch (23-inch ID) casing to total depth. A caliper log has been provided in the Appendix. Perform video and one XY Caliper log prior to casing brushing. The CONTRACTOR shall aggressively brush the lower 100 feet of the injection casing. The CONTRACTOR shall expect to perform multiple attempts to identify a suitable location to perform a successful pressure test.
- B. Casing brushing actions may be performed with the brush installed below the packer. If a pressure change greater than five percent occurs during pressure testing, the test will be abandoned, an additional XY caliper log will be performed, and the 24-inch OD casing will be brushed as needed to facilitate packer installation and sealing. Brushes and brushing tools proposed for use by the CONTRACTOR shall be sufficient in material, diameter, and length to mechanically clean scale from the casing. Non-metallic brushes will not be acceptable.

### 3.05 PRESSURE TESTING

- A. The packer assembly shall include a brush located below the packer which shall aggressively brush the casing as the packer is tripped in the casing and tripped out of the casing. A repeat brush pass over the casing shall be made as the packer/brush assembly is tripped out of the casing. Pressure tests shall be conducted in the injection well using the following procedure.
  1. The CONTRACTOR shall supply a pressure gauge with a calibrated range from 0 to 300 pounds per square inch (psi) in one psi increments, with an accuracy of plus or minus 0.25 percent. The pressure gauge shall be located in an easily accessible and visible location, and at a height for those observing and witnessing the testing as acceptable to the ENGINEER.
  2. In addition to the gauge specified above, the CONTRACTOR shall have on-site a secondary backup gauge meeting all the same specified requirements.
  3. The CONTRACTOR shall submit an original written verification of the pressure gauge calibration for both the primary gauge and the backup gauge prior to commencement of the pressure test. The calibration must be within the last sixty days of test date. The serial number shall be checked to verify that the number on the certification matches the number on the gauge. A copy of the calibration certificate shall be kept onsite at all times during testing and shall be presented to the FDEP representative prior to testing in the field. The pressure gauge calibration certificate shall be provided to the ENGINEER at least seven days prior to the start of the test.
  4. The CONTRACTOR is required to keep the artesian pressure of the well under control at all times by use of salt as a weight material and any other equipment necessary.

5. The CONTRACTOR shall insert an inflatable packer to a depth below the lowermost casing joint. The CONTRACTOR shall prepare a written pipe tally and submit it to the ENGINEER. The pipe tally shall be complete including an inventory of all piping, subs, packer elements, brush assembly and any components used to assemble and lower the packer into the well. Each component, including piping, shall be measured with lengths clearly marked and as requested by the ENGINEER. CONTRACTOR is responsible for any and all costs associated with tripping in and out of the well due to tabulation errors and for any related damages incurred for the same.
6. The casing shall be filled with water and placed under a pressure of at least 180 pounds per square inch (psi), but not more than 190 psi. A maximum pressure change of five percent (5%) is allowed over a sixty-minute test period. The pressure shall be recorded at a minimum every five minutes.
7. Upon successful completion of a pressure test, FDEP will be notified, and a pressure test scheduled with FDEP as identified in this Section.
8. Pressure testing will be witnessed by the ENGINEER and FDEP. The testing shall be certified in writing by the Engineer of Record or its authorized representative.
9. If a pressure change greater than five percent occurs, the test shall be repeated under controlled conditions to the satisfaction of the ENGINEER and the FDEP representative.
10. Upon completion of the test, the bleed-off water volume shall be measured to the nearest ½ gallon in a suitable container as determined by the ENGINEER. The bleed-off process will be witnessed by the ENGINEER (or representative).
11. Upon completion of MIT, proceed with wellhead completion in accordance with Section 13193.

### 3.06 SUBMITTALS

- A. The CONTRACTOR shall deliver to the ENGINEER the following items in the time prescribed.
- B. Pretesting Submittals: Gauge and meter certificates: seven days prior to the commencement of testing.
- C. Field Submittals: Field copies of the video surveys and geophysical logs (XY caliper logs) shall be delivered to the ENGINEER prior to the logger leaving the site. All of these shall be submitted on USB flash drives for the well.
  1. Video Surveys: On USB flash drives, two field copies.
  2. XY Caliper Logs: On USB flash drives, one field copy.
  3. Pressure Tests: Three copies of each gauge calibration record shall be delivered to the ENGINEER in the field immediately prior to the commencement of the test.
- D. Final Submittals: Final geophysical logs (video survey and XY caliper log) shall be delivered to the ENGINEER seven days after the completion of the last test. The video

survey and logs shall be presented in digital format on flash drive. The flash drives shall be submitted to the ENGINEER appropriately labeled for submittal to FDEP. The other logs shall be presented in both pdf and American Standard Code for Information Interchange (ASCII) or Log ASCII Standard (LAS) format transmitted by email to the ENGINEER.

- E. Labels shall be on the final logs and flash drives shall clearly identify the Owner's name, the site, the well number, type of log, depths and date.
- F. For the CONTRACTOR to be Substantially Complete, all final copies of the video survey and XY caliper logs shall be delivered to the ENGINEER. This is in addition to other requirements of substantial completion specified elsewhere.

- END OF SECTION-

**DIVISION 15**  
**MECHANICAL CONSTRUCTION**

## SECTION 15000 - BASIC MECHANICAL REQUIREMENTS

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install to the required line and grade, all piping together with all fittings and appurtenances, required for a complete installation. All piping located outside the face of structures or building foundations and all piping embedded in concrete within a structure or foundation shall be considered exterior piping.
- B. The CONTRACTOR shall furnish and install fittings, couplings, connections, sleeves, adapters, harness rods and closure pieces as required to connect pipelines of dissimilar materials and/or sizes herein included under this Section and other concurrent Contracts for a complete installation.
- C. The CONTRACTOR shall furnish all labor, materials, equipment, tools, and services required for the furnishing, installation and testing of all piping as shown on the Drawings, specified in this Section and required for the Work. Piping shall include all fittings, adapter pieces, couplings, closure pieces, harnessing rods, hardware, bolts, gaskets, wall sleeves, wall pipes, hangers, supports, and other associated appurtenances for required connections to equipment, valves, or structures for a complete installation.
- D. The CONTRACTOR shall provide taps on piping where required or shown on the Drawings. Where pipe or fitting wall thicknesses are insufficient to provide the required number of threads, a boss or pipe saddle shall be installed.
- E. The work shall include, but not be limited to, the following:
  - 1. Connections to existing pipelines.
  - 2. Installation of all new pipe and materials required for a complete installation.
  - 3. Cleaning, testing and disinfecting as required.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 1, General Requirements
- B. Division 2, Sitework
- C. Division 5, Metals
- D. Division 11, Equipment
- E. Division 16, Electrical

### 1.03 MATERIAL CERTIFICATION AND SHOP DRAWINGS

- A. The CONTRACTOR shall furnish to the CITY (through the ENGINEER) a Material Certification stating that the pipe materials and specials furnished under this Section conform to all applicable provisions of the corresponding Specifications. Specifically, the Certification shall state compliance with the applicable standards (ASTM, AWWA, etc.) for fabrication and testing.
- B. Shop Drawings shall include, but not be limited to, complete piping layout, pipe material, sizes, class, locations, necessary dimensions, elevations, supports, hanger details, pipe joints, and the details of fittings including methods of joint restraint. No fabrication or installation shall begin until Shop Drawings are approved by the ENGINEER.

## PART 2 -- PRODUCTS

### 2.01 GENERAL

- A. All specials and every length of pipe shall be marked with the manufacturer's name or trademark, size, class, and the date of manufacture. Special care in handling shall be exercised during delivery, distribution, and storage of pipe to avoid damage and unnecessary stresses. Damaged pipe will be rejected and shall be replaced at the CONTRACTOR's expense. Pipe and specials stored prior to use shall be stored in such a manner as to keep the interior free from dirt and foreign matter.
- B. Testing of pipe before installation shall be as described in the corresponding ASTM or ANSI Specifications.
- C. The CONTRACTOR shall verify existing above ground and buried piping tie-in connections before fabricating new piping assemblies. The CONTRACTOR shall take whatever measurements that are required to complete the work as shown or specified.
- D. All changes in directions or elevations shall be made with fittings, unless otherwise shown.

### 2.02 UNIONS

- A. For stainless steel pipes assembled with threaded joints and fittings, unions shall conform to applicable ANSI B16 requirements.

## PART 3 -- EXECUTION

### 3.01 INSTALLATION

- A. All piping shall be installed by skilled workers and in accordance with the best standard practice for piping installation as shown on the Drawings, specified or recommended by the pipe manufacturer. Proper tools and appliances for the safe and convenient handling and installing of the pipe and fittings shall be used. Great care shall be taken to prevent any pipe coating from being damaged on the inside or outside of the pipe and fittings. All pieces shall be carefully examined for defects, and no piece shall be installed which is known to be cracked, damaged, or otherwise defective. If any defective pieces should be

discovered after having been installed, it shall be removed and replaced with a sound one in a satisfactory manner by the CONTRACTOR and at their own expense. Pipe and fittings shall be thoroughly cleaned before they are installed and shall be kept clean until they are accepted in the complete work.

- B. All piping shall be installed in such a manner that it will be free to expand and/or contract without injury to itself or to structures and equipment to which it is connected. All piping shall be erected to accurate lines and grades with no abrupt changes in line or grade and shall be supported and braced against movement, temporary, or permanent. All exposed piping shall be installed with vertical and horizontal angles properly related to adjoining surfaces or pipes to give the appearance of good quality.

### 3.02 STAINLESS STEEL PIPE

- A. Installation of stainless steel pipe shall be by skilled workers in accordance with the manufacturer's recommendations. Joints for stainless steel piping and tubing shall be threaded.
- B. No welding of stainless steel pipe shall be allowed in the field.
- C. Install unions at the connections to each piece of equipment to allow removal of equipment without dismantling connecting piping.
- D. Threaded and/or screwed stainless steel joints shall have long tapered full depth threads to be made with the appropriate paste or jointing compound, depending on the type of fluid to be processed through the pipe. All pipe up to, and including 1-1/2-inches, shall be reamed to remove burr and stood on end and well pounded to remove scale and dirt. Wrenches on valves and fittings shall be applied directly over the joint being tightened. Not more than three pipe threads shall be exposed at each connection. Pipe, in all lines subject to temperature changes shall be cut short and cold sprung into place to compensate for expansion when hot.
- E. Stainless steel tubing shall be thoroughly cleaned and the end of pipes uniformly flared by a suitable tool to the bevels of the fittings used. Wrenches shall be applied to the bodies of fittings where the joint is being made and in no case to a joint previously made. Dimensions of tubing and piping shall be in complete accordance with the fittings used. No flare joints shall be made on piping not suited for flare joints.

- END OF SECTION -

## SECTION 15013 – STAINLESS STEEL TUBING

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install stainless steel pipe and all appurtenant work, complete in place, all in accordance with the requirements of the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals
- B. Section 01600 – Materials and Equipment
- C. Section 15000 – Basic Mechanical Requirements
- D. Section 15995 - Pipeline Testing

#### 1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the Section 01300, Submittals.

### PART 2 -- PRODUCTS

#### 2.01 316 STAINLESS STEEL TUBING

- A. Process tubing shall be ¼ inch or ½ inch diameter x 0.065-inch seamless, annealed, ASTM A-269 Type 316L Stainless Steel with Type 316 - 37 degrees Stainless Steel flared fittings or Swagelock or Parker-CPI flareless fittings.

#### 2.03 UNIONS

- A. Stainless steel unions shall be Uniseal Pipe Coupling as manufactured by CPC-Cryolab, or equal.
- B. The pressure rating of unions shall exceed that of the flanges specified for the piping system in which they are installed.
- C. Unions shall be manufactured from the same alloy as the pipe and shall be joined to the pipe by the methods specified for fittings for the piping system in which they are installed.
- D. Unions shall utilize a resilient, replaceable gasket to provide a leak-tight joint between the union ends. Gaskets shall be of PTFE/metal composite construction suitable for the piping system service.

## PART 3 -- EXECUTION

### 3.01 INSTALLING UNIONS

- A. Provide unions on exposed lines 2 inches and smaller as follows:
1. At every change in direction (horizontal and vertical).
  2. Six to 12 inches downstream of valves.
  3. Every 40 feet in straight piping runs.
  4. Near threaded connections to mechanical equipment.
  5. On both sides of threaded valves and other in-line instruments.

- END OF SECTION -

## SECTION 15020 – PIPE SUPPORTS

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall provide all tools, supplies, materials, equipment, and all labor necessary for the furnishing, construction, and installation of all pipe supports, hangers, guides, and anchors shown, specified, or required for a complete and operable piping system, in accordance with the requirements of the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 15000 – Basic Mechanical Requirements

#### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Commercial Standards

- 1. ASME B31.1 Power Piping.

#### 1.04 SUBMITTALS

- A. Shop Drawings

- 1. The CONTRACTOR shall furnish complete shop drawings of all pipe supports, anchors, and appurtenances, in accordance with Section 01300, Submittals.

### PART 2 -- PRODUCTS

#### 2.01 GENERAL REQUIREMENTS

- A. Piping supports shall be provided for stainless steel piping and tubing for pressure instrumentation piping. The CONTRACTOR shall note that pipe support locations are not shown on the Drawings and shall follow the Specifications herein in locating supports. Where deviations and modifications are required, they shall be made subject to review by the ENGINEER. A detailed layout of pipe supports shall be submitted to the ENGINEER for review.
- B. All supports and parts required for the installation of the piping systems shall conform to the requirements of the ASME B31.1 and MSS Standard practice SP-58 and SP-69, except as modified and supplemented by the requirements set forth herein. All piping shall be supported in such a manner to fulfill the intent of this Specification.
- C. Supporting appurtenances shall be arranged to prevent undue stress on equipment to which piping is connected. Vertical runs of pipe shall be supported independently of the connected horizontal runs. All vertical pipes shall be supported at intervals of at least 10 feet by clamps, brackets, or wall rests. All piping shall be supported independently of the

equipment to which it is connected. All in line devices (flowmeters, etc.) shall be removable without the need for temporary supports for adjacent and connecting piping.

- D. Stainless steel piping supports shall be fabricated of Type 316 stainless steel.
- E. Where a specific pipe support is called for on the Drawings, this support shall be used as and where indicated for the specific application.

#### 2.03 PIPE SUPPORT SPACING

- A. The distance between supports for stainless steel piping and tubing shall not exceed five (5) feet. In all cases, there shall be a minimum of one support per laying length of pipe on uninterrupted horizontal runs. This support shall be placed within one (1) foot of the joint. If the pipe manufacturer recommends a smaller spacing interval than specified herein, then the manufacturer's spacing shall be used.

#### 2.04 METAL FRAMING SYSTEMS

- A. A metal framing system as manufactured by Unistrut, Globe-Strut or equal may be used for supporting the piping system. The metal framing system shall be designed and installed according to manufacturer's recommended procedure and shall be capable of supporting the piping system as specified herein.
- B. Metal framing system channels, inserts, fittings, and closure strips shall be Type 316 stainless steel.

#### 2.05 THRUST RESTRAINT

- A. Pipe anchors shall be spaced to divide pipe into sections. Anchors shall be located at valves, changes in direction of piping, and major branch connections. Anchors shall be of a type recommended by the pipe manufacturer and reviewed by the ENGINEER.
- B. In general, all valves and fittings shall be restrained in an approved manner such that the unbalanced force developed at them shall be supported independent of the piping system.

### PART 3 -- EXECUTION

#### 3.01 INSTALLATION

- A. Pipe supports and hangers shall be positioned in such a way as to produce an orderly, neat piping system.
- B. Each section of the pipeline shall be laid out and all connections made while the pipe is held in temporary supports. After completion of connections, the pipe may be clamped in position. When piping is correctly installed, a clamp or pipe connection may be loose or removed without displacement of the pipeline.

### 3.02 FABRICATION

- A. Pipe hangers and supports shall be fabricated and installed by experienced welders and fitters, using the best welding procedures available. Fabricated supports shall be neat in appearance without sharp corners, burrs, and edges.

- END OF SECTION -

## SECTION 15030 - PIPING AND EQUIPMENT IDENTIFICATION SYSTEMS

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install all components of the system for identification of the casing as specified hereinafter. Identification lettering shall be applied to the 24-inch casing of IW-2.
- A. The CONTRACTOR shall furnish and install all components of the system for identification of the casing as specified hereinafter. Identification lettering shall be applied to the 24-inch casing of IW-2.

### PART 2 -- PRODUCTS

#### 2.01 INJECTION WELL CASING IDENTIFICATION LETTERING

- A. The CONTRACTOR shall paint identification lettering in the form of plain upper-case block lettering identifying the name of the injection. Location and size of lettering shall match existing lettering unless otherwise indicated by the CITY. All lettering shall be painted in black color.

### PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

## SECTION 15095 - VALVES, GENERAL

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install, complete with all assemblies and accessories, all valves shown on the Drawings and specified herein including all fittings, appurtenances and transition pieces required for a complete and operable installation.
- B. All valves shall be constructed of first quality materials which have strength, wearing, and corrosion resistance characteristics entirely suitable for the types of service for which the individual valves are designated. Except where noted otherwise, valves designated for water service shall conform to pertinent sections of the latest revision of AWWA C500 Specifications. Cast iron valve bodies and parts shall meet the requirements of the latest revision of ASTM Designation A-126, "Standard Specifications for Gray Iron Castings for Valves, Flanges, and Pipe Fittings, Class B."
- C. All valve body castings shall be clean, sound, and without defects of any kind. No plugging, welding, or repairing of defects will be allowed.
- D. Valves shall have flanged ends for exposed service and mechanical joint ends for buried service, unless otherwise shown on the Drawings or specified herein. Flanged ends shall be flat-faced, 125 lb. American Standard unless otherwise shown or specified in accordance with ANSI B16.1. All bolt heads and nuts shall be hexagonal of American Standard size. The CONTRACTOR shall be responsible for coordinating connecting piping. Valves with screwed ends shall be made tight with Teflon tape. Unions are required at all screwed joint valves.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01600 – Materials and Equipment
- B. Section 01300 – Submittals
- C. Section 15000 – Basic Mechanical Requirements

#### 1.03 SUBMITTALS

- A. The CONTRACTOR shall furnish to the CITY, through the ENGINEER, a Performance Affidavit where required in individual valve specifications, utilizing the format specified in Section 11000, Equipment General Provisions. Performance tests shall be conducted in accordance with the latest revision of AWWA C500 and affidavits shall conform to the requirements of the Specifications
- B. Shop Drawings conforming to the requirements of Section 01300, Submittals, are required for all valves, and accessories. Submittals shall include all layout dimensions, size and materials of construction for all components, information on support and anchoring where necessary, pneumatic and hydraulic characteristics and complete descriptive information to demonstrate full compliance with the Documents. Shop Drawings for electrically

operated/controlled valves shall include all details, notes, and diagrams which clearly identify required coordination with the electrical power supply and remote status and alarm indicating devices. Electrical control schematic diagrams shall be submitted with the Shop Drawings for all electrical controls. Diagrams shall be drawn using a ladder-type format in accordance with JIC standards. Shop Drawings for pneumatically operated/controlled valves shall include all details, notes, and diagrams which clearly identify required coordination with the compressed air (service air) system and electrical controls.

- C. Operation and maintenance manuals and installation instructions shall be submitted for all valves and accessories in accordance with the Specifications. The manufacturer(s) shall delete all information which does not apply to the equipment being furnished.

## PART 2 – PRODUCTS

### 2.01 FIRE HYDRANTS

- A. Hydrants for fire service shall be as manufactured by the Mueller Co., Darling Valve Co., or equal. The fire hydrants shall conform to the AWWA C502, Standard for Dry-Barrel Fire Hydrants. The fire hydrants shall be provided as follows:
  - 1. 6-inch hydrant main valve opening
  - 2. 6-inch mechanical joint inlet
  - 3. Operating nut, turn counterclockwise to open.
  - 4. Two 2-1/2-inch hose nozzles (nozzle threads to be National Standard)
  - 5. One 4-1/2-inch pumper nozzle (nozzle threads to be National Standard Fire Hose Coupling screw threads as defined by NFPA Standard No. 194).
  - 6. Shall open against pressure.
- B. Extension pieces for barrel and stern shall be provided needed for setting the hydrant at the elevations as indicated on the Drawings.
- C. The CONTRACTOR shall confirm that the hydrants being provided are compatible with local firefighting equipment at the time of construction.
- D. Fire hydrants shall be a "traffic" model incorporating a breakable flange and a cast iron safety stem coupling at the ground line, designed to shear on severe impact.

## PART 3 -- EXECUTION

### 3.01 INSTALLATION

- A. Except where noted otherwise herein, all valves shall be installing and tested in accordance with the latest revision of AWWA C500. Before installation, all valves shall be lubricated, manually opened and closed to check their operation and the interior of the

valves shall be thoroughly cleaned. Valves shall be placed in the positions shown on the Drawings. Joints shall be made as directed under the Piping Specifications. The valves shall be so located that they are easily accessible for operating purposes, and shall bear no stresses due to loads from the adjacent pipe. The CONTRACTOR shall be responsible for coordinating connecting piping.

- B. All valves shall be tested at the operating pressures at which the particular line will be used. Any leakage or "sweating" of joints shall be stopped, and all joints shall be tight. All motor operated and cylinder operated valves shall be tested for control operation as directed by the ENGINEER.
- C. Provide valves in quantity, size, and type with all required accessories as shown on the Drawings.
- D. Install all valves and appurtenances in accordance with manufacturer's instructions. Install suitable corporation stops at all points shown or required where air binding of pipe lines might occur. Install all valves so that operating handwheels or wrenches may be conveniently turned from operating floor but without interfering with access, and as approved by ENGINEER. Unless otherwise approved, install all valves plumb and level. Valves shall be installed free from distortion and strain caused by misaligned piping, equipment or other causes.

### 3.02 SHOP AND FIELD TESTING

- A. Shop and field testing of valves shall be as follows:
  - 1. Certified factory testing shall be provided for all components of the valve and operator system. Valves and operators shall be shop tested in accordance with the requirements in the latest revision of AWWA C500, including performance tests, leakage test, hydrostatic tests, and proof-of-design tests. The manufacturer through the CONTRACTOR shall submit certified copies of the reports covering the test for acceptance by the ENGINEER.
  - 2. Shop testing shall be provided for the operators consisting of a complete functional check of each unit. Any deficiencies found in shop testing shall be corrected prior to shipment. The system supplier through the CONTRACTOR shall submit written certification that shop tests for the electrical/pneumatic system and all controls were successfully conducted and that these components provide the functions specified and required for proper operation of the valve operator system.
  - 3. The CONTRACTOR shall conduct field tests to check and adjust system components, and to test and adjust operation of the overall system. Preliminary field tests shall be conducted prior to start-up with final field tests conducted during start-up. The factory service representative shall assist the CONTRACTOR during all field testing and prepare a written report describing test methods, and changes made during the testing, and summarizing test results. The service representative shall certify proper operation of the valve operator system upon successful completion of the final acceptance field testing.

4. Preliminary and final field tests shall be conducted at a time approved by the ENGINEER. The ENGINEER shall witness all field testing.
5. All costs in connection with field testing of equipment such as energy, light, lubricants, water, instruments, labor, equipment, temporary facilities for test purposes, etc. shall be borne by the CONTRACTOR. The CONTRACTOR shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the CITY formally takes over the operation thereof.
6. Preliminary field tests shall be conducted prior to start-up and shall include a functional check of the entire valve operator system and all system components. Preliminary field tests shall demonstrate that the valve operator system performs according to specifications and that all equipment, valves, controls, alarms, interlocks, etc., function properly. The preliminary field test report must be approved by the ENGINEER prior to conducting final field acceptance tests. Based on results of preliminary field tests, the CONTRACTOR shall make any adjustments required to settings, etc., to achieve the required valve closing time and operation specified or otherwise directed by the ENGINEER.
7. Final field acceptance tests shall be conducted simultaneously with the start-up and field testing of the pumps, air compressors, process air blowers, etc. Field tests shall be conducted for the full range of operating modes and conditions specified and as directed by the ENGINEER. Each of the valves shall be tested at minimum, maximum, and normal head/flow conditions, and under all specified conditions of opening and closing. Performance of pneumatic valves and compressed air system under normal operating conditions and during simulated power failures shall be checked.
8. Field testing shall include optimization of opening and closing times of the valves. The CONTRACTOR shall provide the means for accurate measurement of pipeline pressures as directed by the ENGINEER. Valve opening and closing times shall be adjusted based on process requirements to optimize operation of the valves. Final valve opening and closing times as determined by field tests shall be approved by the ENGINEER prior to final acceptance of the system.

- END OF SECTION -

## SECTION 15104 - BALL VALVES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install ball valves, complete and operable, as shown and specified herein, including epoxy coating, appurtenances, operators, and accessories, all in accordance with the requirements of the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 15095 - Valves, General

#### 1.03 SUBMITTALS

- A. Shop Drawings: Submit shop drawings in accordance with the section entitled "Submittals." The shop drawings shall include the following:
  - 1. Manufacturer's standard literature.
  - 2. Dimension drawings for all valves to be supplied.
  - 3. Valve manufacture's recommended instructions for joining the valves and piping.
- B. Operation and Maintenance Manuals: Submit operation and maintenance manuals in accordance with the section entitled "Submittals".

### PART 2 -- PRODUCTS

#### 2.01 STAINLESS STEEL BALL VALVES

- A. Ball valves for use with stainless steel piping systems, including instrument isolation, air lines, and moisture drains shall be end entry type with type 316 stainless steel body and trim, Teflon seats and seals and flanged or threaded connections as indicated. Valve body shall be either two or three piece design, no internal ring for the ball shall be acceptable. Valves shall be class 150.
- B. Valves shall be supplied with stainless steel manual lever or "T" handle. Valves used as moisture drain valves shall be installed at low points of the line and piped to drain.
- C. Manufacturers:
  - 1. Jamesbury Corporation
  - 2. Jenkins Bros
  - 4. Wm. Powell Company

5. Worcester Controls
6. Or Equal.

### PART 3 -- EXECUTION

#### 3.01 GENERAL

- A. All valves shall be installed in accordance with provisions of Section 15095 entitled "Valves, General." Care shall be taken that all valves in plastic lines are well supported on each end of the valve.
- B. All valves shall be tested to unidirectional or bi-directional shut-off as required by service conditions.

- END OF SECTION -

**APPENDIX A**

**IW-2 CALIPER LOG OCTOBER 20, 2022**

**APPENDIX B**

**IW-2 VIDEO SURVEY OCTOBER 20, 2022**  
*(available from City upon request)*

# FORM 1

## SUBMITTAL CHECKLIST FORM

The items below are required components of your solicitation response in order for your bid/proposal/submittal to be considered responsive and responsible. Please complete and submit this submittal checklist form as the cover page of your submittal with all of the items below in the order listed.

Please indicate Yes or No in the "Submitted (Yes/No)" column below to indicate which required components were provided with your submittal.

Submitted (Yes/No)	Required Bid Components
Yes	This Submittal Checklist Form completed and included as the cover page of your submittal.
Yes	A Table of Contents that clearly identifies each section and page number of your submittal.
Yes	Information and/or documentation that addresses and/or meets the requirements outlined in Section III – Scope of Work/Services, including any procedural or technical enhancements/innovations which do not materially deviate from the objectives or required content of the Scope of Work/Services.
Yes	Forms (Completed) Form 1 Submittal Checklist Form* Form 2 Acknowledgement and Signature Page Form 3 Bid Form* Form 4 Vendor Reference Form* Form 5 Hold Harmless and Indemnity Clause Form 6 Non-Collusion Affidavit Form 7 Sworn Statement...Public Entity Crimes Form 8 Certifications Regarding Debarment... Form 9 Drug-Free Workplace Program Form 10 Solicitation, Giving, and Acceptance... Form 11 W-9 (Request for Taxpayer Identification) Form 12 Trench Safety Form Form 13 Bid Guaranty Form Form 14 List of Subcontractors
Yes	Certificate(s) of insurance that meet the requirements of Section 2.17
Yes	Proof of State of Florida Sunbiz Registration

This checklist is only a guide, please read the entire solicitation to ensure that your submission includes all required information and documentation.

# FORM 2

## ACKNOWLEDGMENT AND SIGNATURE PAGE

This form must be completed and submitted by the date and the time of bid opening.

Legal Company Name (include d/b/a if applicable): Florida Design Drilling LLC

If Corporation - Date Incorporated/Organized: 2005 Federal Tax Identification Number: 20-20779560

State Incorporated/Organized: Florida

Company Operating Address: 7733 Hooper Road

City: West Palm Beach State: FL Zip Code: 33411

Remittance Address (if different from ordering address):

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

Company Contact Person: Jeffrey Holst Email Address: jeff@fldrilling.com

Phone Number (include area code): 561-818-3228 Fax Number (include area code): 561-844-2967

Company's Internet Web Address: www.fldrilling.com

IT IS HEREBY CERTIFIED AND AFFIRMED THAT THE BIDDER/PROPOSER CERTIFIES ACCEPTANCE OF THE TERMS, CONDITIONS, SPECIFICATIONS, ATTACHMENTS AND ANY ADDENDA. THE BIDDER/PROPOSER SHALL ACCEPT ANY AWARDS MADE AS A RESULT OF THIS SOLICITATION. BIDDER/PROPOSER FURTHER AGREES THAT PRICES QUOTED WILL REMAIN FIXED FOR THE PERIOD OF TIME STATED IN THE SOLICITATION.

Bidder/Proposer's Authorized Representative's Signature:  Date: December 5, 2023

Type or Print Name: Jeffrey Holst - Senior Vice President

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF BIDDER/PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE BID/PROPOSAL NON-RESPONSIVE. THE CITY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY BID/PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE BIDDER/PROPOSER TO THE TERMS OF ITS OFFER.

## SUBMISSION

How to submit bids/proposals: Vendor's solicitation response may be submitted electronically through BidSync, the City's designated electronic bidding system, or by mail or hand delivery to the address noted above. It is the Vendor's sole responsibility to assure its response is submitted and received by the date and time specified in the solicitation. Any timeframe references are in Eastern Standard Time. The official time for electronic submittals is BidSync's servers, as synchronized with the atomic clock. All parties without reservation will accept the official time.

### Important Notice:

The Procurement Services Division shall distribute all official changes, modifications, responses to questions or notices relating to the requirements of this document. Any other information of any kind from any other source shall not be considered official, and bidders relying on other information do so at their own risk.

The responsibility for submitting a bid/proposal on or before the time and date is solely and strictly the responsibility of the bidder/proposer, the City will in no way be responsible for delays caused by technical difficulty or caused by any other occurrence. No part of a bid/proposal can be submitted via FAX or via direct Email to the City. No variation in price or conditions shall be permitted based upon a claim of ignorance.

# FORM 4

## VENDOR REFERENCE FORM

City of Hollywood Solicitation #: IFB-143-23-JJ  
 Reference for: Florida Design Drilling LLC

Organization/Firm Name providing reference: ASRus, LLC  
 Organization/Firm Contact Name: Pete Larkin Title: Vice President  
 Email: PLarkin@ASRus.net Phone: (813) 382-8516  
 Name of Referenced Project: TEC Big Bend Power Station DIWs Contract No: 20-00180  
 Date Services were provided: 10/26/2020 - 8/24/2023 Project Amount: \$13,223,373  
 Referenced Vendor's role in Project:  Prime Vendor  Subcontractor/ Subconsultant  
 Would you use the Vendor again?  Yes  No. Please specify in additional comments

Description of services provided by Vendor (provide additional sheet if necessary):  
Construction and testing of two Class I injection wells.

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
<b>Vendor's Quality of Service</b>				
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Vendor's Organization:</b>				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Staff turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Timeliness/Cost Control of:</b>				
a. Project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Additional Comments (provide additional sheet if necessary):  
Florida Design Drilling is well managed, professional, and knowledgeable in all aspects of UIC drilling and testing.

****THIS SECTION FOR CITY USE ONLY****						
Verified via:	Email:	<input type="checkbox"/>	Verbal:	<input type="checkbox"/>	Mail:	<input type="checkbox"/>
Verified by:	Name:				Title:	
	Department:				Date:	

# FORM 5

## HOLD HARMLESS AND INDEMNITY CLAUSE

Florida Design Drilling LLC

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**(Company Name and Authorized Signature, Print Name)**

, the contractor, shall indemnify, defend and hold harmless the City of Hollywood, its elected and appointed officials, employees and agents for any and all suits, actions, legal or administrative proceedings, claims, damage, liabilities, interest, attorney's fees, costs of any kind whether arising prior to the start of activities or following the completion or acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act, error or omission, fault or negligence whether active or passive by the contractor, or anyone acting under its direction, control, or on its behalf in connection with or incident to its performance of the contract.



Signature

Jeffrey Holst

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Printed Name

Florida Design Drilling LLC

---

Name of Company

Senior Vice President

---

Title

**FORM 6**

**NON-COLLUSION AFFIDAVIT**

**STATE OF:** Florida

**COUNTY OF:** Palm Beach, being first duly sworn, deposes and says that:

- (1) He/she is Jeffrey Holst - Senior Vice President of Florida Design Drilling LLC, the Proposer that has submitted the attached Proposal.
- (2) He/she has been fully informed regarding the preparation and contents of the attached Proposal and of all pertinent circumstances regarding such Proposal;
- (3) Such Proposal is genuine and is not a collusion or sham Proposal;
- (4) Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contractor for which the attached Proposal has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices, profit or cost element of the Proposal price or the Proposal price of any other Proposer, or to secure an advantage against the City of Hollywood or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

  
\_\_\_\_\_  
Signature

Jeffrey Holst  
\_\_\_\_\_  
Printed Name

Florida Design Drilling LLC  
\_\_\_\_\_  
Name of Company

Senior Vice President  
\_\_\_\_\_  
Title

  
Michael Perez



## FORM 7

### SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a) FLORIDA STATUTES ON PUBLIC ENTITY CRIMES

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

1. This form statement is submitted to the City of Hollywood by Jeffrey Holst - Senior Vice President for Florida Design Drilling LLC  
(Print individual's name and title) (Print name of entity submitting sworn statement)  
whose business address is  
7733 Hooper Road, West Palm Beach Florida 33411  
and if applicable its Federal Employer Identification Number (FEIN) is 20-20779560. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.

---
2. I understand that "public entity crime," as defined in paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misinterpretation.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in an federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that "Affiliate," as defined in paragraph 287.133(1)(a), Florida Statutes, means:
  1. A predecessor or successor of a person convicted of a public entity crime, or
  2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
- 5 I understand that "person," as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the

United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

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

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

The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime, but the Final Order entered by the Hearing Officer in a subsequent proceeding before a Hearing Officer of the State of the State of Florida,

Division of Administrative Hearings, determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (attach a copy of the Final Order).

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

  
\_\_\_\_\_  
(Signature) Jeffrey Holst - Senior Vice President

Sworn to and subscribed before me this 5th day of December, 2023.

Personally known X

Or produced identification \_\_\_\_\_ Notary Public-State of Florida

\_\_\_\_\_  
(Type of identification) my commission expires 07/11/2026



  
\_\_\_\_\_  
Michael Perez  
(Printed typed or stamped commissioned name of notary public)

# FORM 9

## DRUG-FREE WORKPLACE PROGRAM

IDENTICAL TIE PROPOSALS - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, 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 proposals will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1. 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.
2. 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.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will 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.
5. 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.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of these requirements.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.



Signature

Jeffrey Holst

Printed Name

Florida Design Drilling LLC

Name of Company

Senior Vice President

Title

# FORM 10

## SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY

Florida Statute 112.313 prohibits the solicitation or acceptance of Gifts. "No Public officer, employee of an agency, local government attorney, or candidate for nomination or election shall solicit or accept anything of value to the recipient, including a gift, loan, reward, promise of future employment, favor, or service, based upon any understanding that the vote, official action, or judgment of the public officer, employee, local government attorney, or candidate would be influenced thereby." The term "public officer" includes "any person elected or appointed to hold office in any agency, including any person serving on an advisory body."

The City of Hollywood/Hollywood CRA policy prohibits all public officers, elected or appointed, all employees, and their families from accepting any gifts of any value, either directly or indirectly, from any contractor, vendor, consultant, or business with whom the City/CRA does business.

The State of Florida definition of "gifts" includes the following:

- Real property or its use,
- Tangible or intangible personal property, or its use,
- A preferential rate or terms on a debt, loan, goods, or services,
- Forgiveness of indebtedness,
- Transportation, lodging, or parking,
- Food or beverage,
- Membership dues,
- Entrance fees, admission fees, or tickets to events, performances, or facilities,
- Plants, flowers or floral arrangements
- Services provided by persons pursuant to a professional license or certificate.
- Other personal services for which a fee is normally charged by the person providing the services.
- Any other similar service or thing having an attributable value not already provided for in this section.

Any contractor, vendor, consultant, or business found to have given a gift to a public officer or employee, or his/her family, will be subject to dismissal or revocation of contract.

As the person authorized to sign the statement, I certify that this firm will comply fully with this policy.



---

Signature

Jeffrey Holst

---

Printed Name

Florida Design Drilling LLC

---

Name of Company

Senior Vice President

---

Title

# Request for Taxpayer Identification Number and Certification

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

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p><b>1</b> Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.                  FLORIDA DESIGN DRILLING LLC</p> <p><b>2</b> Business name/disregarded entity name, if different from above</p>	
	<p><b>3</b> Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.</p> <p> <input type="checkbox"/> Individual/sole proprietor or single-member LLC                         <input type="checkbox"/> C Corporation                         <input type="checkbox"/> S Corporation                         <input type="checkbox"/> Partnership                         <input type="checkbox"/> Trust/estate  <input checked="" type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ <u>  P  </u>  <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.  <input type="checkbox"/> Other (see instructions) ▶                 </p>	<p><b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p style="font-size: small;">(Applies to accounts maintained outside the U.S.)</p>
	<p><b>5</b> Address (number, street, and apt. or suite no.) See instructions.                  7733 HOOPER ROAD</p> <p><b>6</b> City, state, and ZIP code                  WEST PALM BEACH, FL 33411</p>	<p>Requester's name and address (optional)</p>
	<p><b>7</b> List account number(s) here (optional)</p>	

## Part I Taxpayer Identification Number (TIN)

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

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

<b>Social security number</b>										
<b>or</b>										
<b>Employer identification number</b>										
2	0		-	2	7	7	9	5	6	0

## Part II Certification

Under penalties of perjury, I certify that:

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

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

<b>Sign Here</b>	Signature of U.S. person ▶		Date ▶ January 3, 2023
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## General Instructions

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

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

### Purpose of Form

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

- Form 1099-INT (interest earned or paid)

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

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

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

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

## What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note: ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or “doing business as” (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity’s name as shown on the entity’s tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a “disregarded entity.” See Regulations section 301.7701-2(c)(2)(iii). Enter the owner’s name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner’s name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity’s name on line 2, “Business name/disregarded entity name.” If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

### Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

### Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

### Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

#### Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys’ fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 5 <sup>2</sup>
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

### Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

### Line 6

Enter your city, state, and ZIP code.

## Part I. Taxpayer Identification Number (TIN)

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/Businesses](http://www.irs.gov/Businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.**

You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.**

You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.**

You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

**What Name and Number To Give the Requester**

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee <sup>1</sup>
b. So-called trust account that is not a legal or valid trust under state law	The actual owner <sup>1</sup>
6. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

\*Note: The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

**Secure Your Tax Records From Identity Theft**

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.**

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Visit [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

# FORM 12

## TRENCH SAFETY

This form must be completed and signed by the Respondent.

Failure to complete this form may result in the solicitation being declared non-responsive.

Respondent acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq., which became effective October 1, 1990, shall be in effect during the period of construction of the project. The respondent by signing and submitting the solicitation is, in writing, assuring that it will perform any trench excavation in accordance with applicable trench safety standards. The respondent further identifies the following separate item of cost of compliance with the applicable trench safety standards as well as the method of compliance:

<u>Method of Compliance</u>	<u>Cost</u>
Sloping	Total \$ <u>1,000.00</u>

Respondent acknowledges that this cost is included in the applicable items of their submittal and in the Grand Total Solicitation Price. Failure to complete the above will result in the solicitation being declared non-responsive.

The Respondent is, and the Owner and Engineer are not, responsible to review or assess Respondent's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act." Respondent is, and the owner and Engineer are not, responsible to determine if any safety related standards apply to the project, including but not limited to, the "Trench Safety Act."

A. Sousa  
Witness Signature

Fernanda Sousa  
Witness Printed Name

7733 Hooper Road, West Palm Beach, FL 33411  
Witness Address

December 5, 2023  
Date

Jeffrey Holst  
Contractor's Signature

Jeffrey Holst  
Printed Name

Senior Vice President  
Title

December 5, 2023  
Date

- END OF SECTION -

**Form 13**

**Bid Guaranty Form**

(Construction)

STATE OF FLORIDA

KNOW ALL MEN BY THESE PRESENTS:

That we Florida Design Drilling LLC, as Principal, and Great Midwest Insurance Company, as

Surety, are held and firmly bound unto the City of Hollywood in the sum of \_\_\_\_\_

Five Percent of Amount Bid Dollars (\$ 5% ) lawful money

of the United States, amounting to 5% of the total SOLICITATION Price, for the payment of said sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying SOLICITATION, dated December 13, 2023 ~~20~~ for

**INJECTION WELL NO. 2 REPAIR**

**SOLICITATION IFB-143-23-JJ**

NOW, THEREFORE, if the principal shall not withdraw said SOLICITATION within 90 days after date of the same and shall within ten days after the prescribed forms are presented to him for signature, enter into a written contract with the CITY, in accordance with the SOLICITATION as accepted, and give bond with good and sufficient surety or sureties, and provide the necessary Insurance Certificates as may be required for the faithful performance and proper fulfillment of such Contract, then this obligation shall be null and void.

Approved SOLICITATION Bond

In the event of the withdrawal of said SOLICITATION within the specified period, or the failure to enter into such contract and give such bond and insurance within the specified time, the principal and the surety shall pay to the City of Hollywood the difference between the amount specified in said SOLICITATION and such larger amount for which the City of Hollywood may in good faith contract with another party to perform the work and/or supply the materials covered by said SOLICITATION.

IN WITNESS WHEREOF, the above bound parties have executed this statement under their several seals this       13th        
day of       December, 2023      , ~~20~~, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WHEN THE PRINCIPAL IS AN INDIVIDUAL:

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature of Individual

\_\_\_\_\_  
Address

\_\_\_\_\_  
Printed Name of Individual

\_\_\_\_\_  
Witness

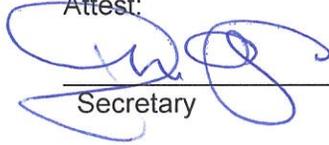
\_\_\_\_\_  
Address

\_\_\_\_\_

Approved SOLICITATION Bond

WHEN THE PRINCIPAL IS A CORPORATION:

Attest:

  
Secretary

Florida Design Drilling LLC  
Name of Corporation

7733 Hooper Road  
Business Address

West Palm Beach, FL 33411

By:   
(Affix Corporate Seal)

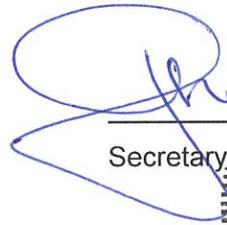
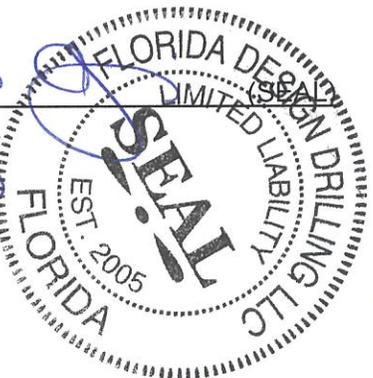
Jeffrey Holst  
Printed Name

Senior Vice President  
Official Title



CERTIFICATE AS TO CORPORATE PRINCIPAL

I, JEANINE M ALFIERI, certify that I am the secretary of the Corporation named as Principal in the attached bond; that Jeffrey Holst who signed the said bond on behalf of the Principal, was then Senior Vice President of said Corporation; that I know his signature, and his signature thereto is genuine and that said bond was duly signed, sealed and attested for and on behalf of said Corporation by authority of its governing body.

  
Secretary 

Approved SOLICITATION Bond

TO BE EXECUTED BY CORPORATE SURETY:

Attest:

Secretary Stephanie Wall, Witness

Great Midwest Insurance Company

Corporate Surety  
800 Gessner, Suite 600

Business Address  
Houston, TX 77024

BY:

(Affix Corporate Seal)

Brett M. Rosenhaus  
Attorney-in-Fact  
Nielson, Rosenhaus & Associates

Name of Local Agency

220 Congress Park Drive, Suite 100  
Business Address  
Delray Beach, FL 33445



STATE OF FLORIDA

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared, Brett M. Rosenhaus to me well known, who being by me first duly sworn upon oath says that he is the attorney-in-fact for the Great Midwest Insurance Company and that the has been authorized by Great Midwest Insurance Company to execute the forgoing bond on behalf of the CONTRACTOR named therein in favor of the City of Hollywood, Florida. Subscribed and sworn to before me this 13th day of December, 2023



Notary Public, State of Florida

My Commission Expires:

- END OF SECTION-

July 1, 2025

**POWER OF ATTORNEY**  
**Great Midwest Insurance Company**

KNOW ALL MEN BY THESE PRESENTS, that **GREAT MIDWEST INSURANCE COMPANY**, a Texas Corporation, with its principal office in Houston, TX, does hereby constitute and appoint:

Dale A. Belis, Marilyn Ann Blome, Donald Bramlage, Edward M. Clark, Christian Collins, F. Danny Gann, David R. Hoover, Jarrett Merlucci, Laura D. Mosholder, Charles J. Nielson, Jessica P. Reno, Audria R. Ward, Edward T. Ward, Kevin Wojtowicz, Richard Zimmerman, Charles D. Nielson, Brett M. Rosenhaus

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **GREAT MIDWEST INSURANCE COMPANY**, on the 1<sup>st</sup> day of October, 2018 as follows:

Resolved, that the President, or any officer, be and hereby is, authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed Ten Million dollars (\$10,000,000.00), which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed in the Company's sole discretion and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, **GREAT MIDWEST INSURANCE COMPANY**, has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 11th day of February, 2021.

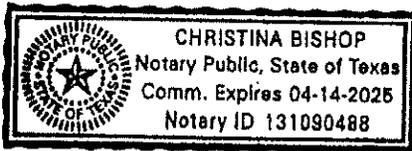


**GREAT MIDWEST INSURANCE COMPANY**

BY   
Mark W. Haushill  
President

**ACKNOWLEDGEMENT**

On this 11th day of February, 2021, before me, personally came Mark W. Haushill to me known, who being duly sworn, did depose and say that he is the President of **GREAT MIDWEST INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.



BY   
Christina Bishop  
Notary Public

**CERTIFICATE**

I, the undersigned, Secretary of **GREAT MIDWEST INSURANCE COMPANY**, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Houston, TX this 13th Day of December, 20 23.



BY   
Leslie K. Shaunty  
Secretary

**"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files and application for insurance of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties.**

# Form 14

## LIST OF SUBCONTRACTORS

The Respondent shall list below the name and address of each Subcontractor who will perform work under this Contract, and shall also list the portion of the work which will be done by such Subcontractor. After the opening of Submittals, changes or substitutions will be allowed with written approval of the City of Hollywood. Subcontractors must be properly licensed.

	<b>Work to be Performed</b>	<b>Subcontractor's Name / Address</b>
1.	Electrical	Cyber Electric of Central Florida
		3384 N.W. 18th Street, Okeechobee, FL 34972
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

NOTE: Attach additional sheets if required.

- END OF SECTION -

**FORM 15**

INFORMATION REQUIRED FROM BIDDERS

GENERAL INFORMATION

The Bidder shall furnish the following information. Failure to comply with this requirement may cause its rejection. Additional sheets shall be attached as required.

1. Contractor's Name/Address: Florida Design Drilling LLC  
7733 Hooper Road, West Palm Beach Florida 33411

2. Contractor's Telephone Number: 561-818-3228  
and e-mail address: jeff@fldrilling.com

3. Contractor's License (attach copy): CGC1522104  
Primary Classification: \_\_\_\_\_  
Broward County License Number (attach copy): \_\_\_\_\_

4. Number of years as a Contractor in construction work of the type involved in this Contract: 18

5. List the names and titles of all officers of Contractor's firm:  
Daniel Ringdahl, CEO  
Noah Ringdahl, President  
Jeffrey Holst, Senior Vice President

6. Name of person who inspected site or proposed work for your firm:  
Name: Brandon Holst  
Date of Inspection: \_\_\_\_\_

7. What is the last project of this nature you have completed?  
TECO Big Bend Deep Injection Wells

8. Have you ever failed to complete work awarded to you; if so, where and why?

No

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9. Name three individuals or corporations for which you have performed work and to which you refer:

See attached references.

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10. List the following information concerning all contracts on hand as of the date of submission of this proposal (in case of co-venture, list the information for all coventures).

Name of Project	City	Total Contract Value	Contracted Date of Completion	% Completion to Date
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See attached.

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(Continue list on inset sheet, if necessary)

11. What equipment do you own that is available for the work?

Backhoe

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12. What equipment will you purchase for the proposed work?

None

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13. List at least five (5) similar projects completed within the last ten (10) years by the bidder. For purposes of this requirement, 'similar' projects shall be considered to include Florida Department of Environmental Protection (FDEP)

Underground Injection Control (UIC) Class I injection well mechanical integrity tests (MITs). Include owner, project value, completion date, reference contact information and brief project description. The determination of whether a project is sufficiently similar shall be at the sole discretion of the City and the Engineer.

Commented [WM1]: To be modified for each project.

See attached.

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(Add sheets as requested.)

14. Name the Project Manager proposed for this project. Attach a copy of the project manager's resume.

Jeffrey Holst

NOTE: If requested by CITY, the Bidder shall furnish a notarized financial statement, references and other information, sufficiently comprehensive to permit an appraisal of its current financial condition.

++ END OF SECTION