



City of Cooper City, Florida
ITB 2023-06-UTL Pump Station #55 Generator Replacement



CITY OF COOPER CITY, FLORIDA

Invitation to Bid

Pump Station #55 Generator Replacement

ITB 2023-06-UTL

For information, contact the Purchasing Division:

The Purchasing Division
954-433-4300 Ext. # 268
Purchasing@CooperCity.gov

Release Date: Friday, October 27, 2023
Due Date: Monday, November 27, 2023



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Pump Station #55 Generator Replacement



INVITATION TO BID

CITY OF COOPER CITY
NOTICE TO BIDDERS/PROPOSERS

NOTICE IS HEREBY GIVEN that the City of Cooper City, Florida, will be accepting sealed bids until 3:00 PM (EST) on Monday, November 27, 2023, from qualified contractors capable of replacing the existing pump station #55 generator including electrical work, power, control, and lighting replacement. Proposed improvements consist of replacing the new generator outside of the existing generator room and will include a sound-attenuating, weatherproof enclosure, and sub-base fuel tank. The project will also involve the installation of a 12-inch Ductile Iron Pipe (DIP) force main bypass using open-cut methods at pump station #55. The scope of work encompasses connecting the new force main to the existing manifold on the pump station's suction side force main, installing fitting, valves, and establishing connections to the existing 12-inch force main. Bidders/Proposers shall comply with all rules and regulations for this type of project and follow the terms, conditions, and specifications contained in this solicitation. The Awarded Contractor shall provide all materials, labor, tools, equipment, machinery, mobilization, supervision, supplies, expertise, and services for the completion of the project in its entirety to the City of Cooper City.

PUMP STATION #55 GENERATOR REPLACEMENT
ITB 2023-06-UTL

The detailed Invitation to Bid (ITB) shall be obtained online at www.DemandStar.com.

Bids must be received in the City Clerk's Office located in City Hall, 9090 SW 50th Place, Cooper City, Florida 33328 no later than **3:00PM (EST), Monday, November 27, 2023**. The outside of the envelope or box must be clearly marked "ITB 2023-06-UTL, PUMP STATION #55 GENERATOR REPLACEMENT" and shall contain one (1) identified, unbound original, two (2) copies and one (1) electronic copy (flash drive) of your bid/proposal.

A mandatory pre-bid meeting will be held on **Thursday, November 9, 2023, at 2:00 PM EST** and located at the Cooper City Public Works Department located at 9070 SW 51st Street, Cooper City, FL 33328.

For questions and/or requests for information about this solicitation, please contact Purchasing@CooperCity.gov. Such contact shall be for clarification purposes only. Material changes, if any, to the Scope of Services or bidding procedures will only be transmitted by written addendum. All questions must be submitted in writing. Questions of a material nature must be received prior to the cut-off date specified in the Bid/Proposal Schedule. No part of your bid/proposal can be submitted via fax or e-mail.



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

The City Commission of the City of Cooper City reserves the right, for any reason, to reject any and all bids/bids and to make awards in the best interest of the City.

A Cone of Silence is hereby imposed pursuant to the updated Section 2-270 of the City's Code of Ordinances, prohibiting communication regarding this Invitation to Bid between a potential contractor, vendor, service provider, bidder, lobbyist, or; consultant and the City Commissioners, City's professional staff including, but not limited to, the City Manager and staff, any member of the City's selection or evaluation committee. For further information about the Cone of Silence, please see Section 2-270 updated by Ordinance 23-15 or contact the City's Purchasing Division.

CITY OF COOPER CITY
City Clerk's Office

Please publish one (1) time on:

Wednesday, November 1, 2023

Please send invoice and proof of publication to:

Tedra Allen, City Clerk
City of Cooper City
9090 SW 50th Place
Cooper City, FL 33328
Tallen@CooperCity.gov

[END OF SECTION]



SECTION I – INTRODUCTION AND INFORMATION

This solicitation may include the words “bid”, “proposal” and “offer”. These words are used interchangeably in reference to all offers submitted by prospective respondents in response to Requests for Quotes, Requests for Qualifications, Requests for Proposals and Invitations to Bid.

1.1 PURPOSE

The City of Cooper City (the “City”) will receive sealed bids on the date and time specified below for furnishing all materials/supplies, equipment, machinery, mobilization, labor, supervision, expertise, and services necessary to replace the existing pump station #55 generator inclusive of all electrical, power, control and lighting replacement. Proposed improvements consist of replacing the new generator outside of the existing generator room and will include a sound-attenuating, weatherproof enclosure, and sub-base fuel tank. Project also consist of installing 12-inch force main permanent bypass. Bidders shall comply with all rules and regulations for this type of installation and follow the terms, conditions, and specifications contained in this solicitation. The awarded Contractor shall provide all labor, materials, equipment, insurance, and incidentals to complete the work in its entirety for the City of Cooper City.

1.2 DUE DATE & SUBMITTALS

1.2.1 All bids are due no later than 3:00 PM (EST), Monday, November 27, 2023, to the Office of the City Clerk located at 9090 SW 50th Place, Cooper City, FL 33328. Bids shall be opened and publicly read in the Commission Chambers, on the date and at the time specified.

1.2.2 Original copy of Attachment A Bid Form as well as any other pertinent Forms and documents must be returned in order for the bid to be considered for award. All bids are subject to the conditions specified herein and on the attached General Conditions, Technical Specifications, Project Drawings and Bid Form. The City encourages early submittal of bids.

1.2.3 The completed, signed bid must be submitted in a **SEALED ENVELOPE CLEARLY MARKED WITH THE BID TITLE**. Bids mistakenly opened by City staff, due to failure of the Bidder to correctly identify the package, will be rejected. Telegraphic, facsimile and email bids will not be accepted.

1.2.4 Bids received after the closing time and date, for any reason whatsoever, will not be considered. All bids received after that time will not be accepted and shall be returned to the Bidder. Any disputes regarding timely receipt of proposals shall be decided in the favor of the City. Late bids will be rejected.



1.3 PRE-BID MEETING

A mandatory pre-bid meeting will be held on Friday, November 9, 2023, at 2:00 PM EST and located at the Cooper City Public Works Department located at 9070 SW 51st Street, Cooper City, FL 33328.

1.4 ELIGIBILITY AND COMPETENCY OF BIDDERS

1.4.1 To be eligible for award of a contract in response to this solicitation, the Bidder must demonstrate that they, or the principals assigned to the project, have successfully completed services, as specified in the Scope of Services/Technical Specifications section of this solicitation, are normally and routinely engaged in performing such services and are properly and legally licensed to perform such work.

1.4.2 Bidders are required to complete and submit with their Bid, the Qualification Requirements included in the Bid Proposal. Bidder must demonstrate qualifications to perform the Work including sufficient manpower and equipment, that previous experience meets the bid requirements, that past projects have been completed within budget and on schedule, that past projects have been managed professionally and construction quality and field supervision are professional and of best industry practice. Owner will evaluate experience and conduct reference checks as part of the bid evaluation process. Owner shall have sole opinion as to whether Bidder's requisite experience is deemed acceptable. Time is of the essence for this project, accordingly the City is anticipating that Substantial Completion of the Work will occur no later than 370 calendar days after the Project Initiation Date, and Final Completion will occur no later than 30 calendar days after Substantial Completion. Bidders are encouraged to submit in their Bid Proposal their expected timeframes for Substantial Completion and Final Completion of the Work that are earlier (or later) in time than the City's anticipated timeframes.

1.4.3 To demonstrate qualifications to perform the Work, each Bidder must submit with his/her Bid written evidence of previous experience with at least three (3) similar projects completed in last five (5) years within the United States. Bidder shall submit additional information, after the Bid Opening, if requested by Owner, to enable Owner to complete a comprehensive review of the Bid.

1.5 AGREEMENT TERM

1.5.1 The term of this Agreement shall be for the duration of the project, City acceptance, and payment of the project.

1.5.2 The Agreement Time allotted for this project shall be consistent with the duration specified in the Agreement in Article 3.2 and Technical Specifications.

1.5.3 The form and legal sufficiency of the Agreement shall be subject to the approval of the City Attorney.



1.6 SUPPLY/DELIVERY LOCATION

Pump Station #55 is located at the Cooper City Public Works Department, 9070 NSW 51st Street, Cooper City, FL 33328. The project site is more particularly identified in the plans included herein at **Exhibit A**. All work shall be completed within the time to complete unless otherwise approved by the writing by the City.

1.7 PRICE

Bidder/Proposer warrants, by virtue of bidding, that the bid and prices quoted in the solicitation will be firm for acceptance by the City for a period of one-hundred and twenty (120) days from the bid due date unless otherwise stated herein. Bidder acknowledges that, in certain circumstances, the City may require this amount of time to evaluate and award a bid.

1.8 PRICE ADJUSTMENTS

NOT PERMITTED AND PURPOSELY OMMITTED FOR THIS SOLICITATION

1.9 METHOD OF AWARD

1.9.1 The contract will be awarded to the *lowest* responsive, responsible Bidder whose Bid, conforming to the Solicitation, is most advantageous to the City. The *lowest* responsive, responsible Bidder(s) will be determined in conjunction with the methods described below. Tie Bids will be decided as described in the General Conditions.

1.9.2 Bidder must bid on all items listed on Bid Form to qualify for award of the agreement.

1.9.3 The City reserves the right to reject all bids or any portion of any bid the City deems necessary for the best interest of the City, to accept any item or group of items unless qualified by the Bidder, to acquire additional quantities at prices quoted on the Bid Form unless additional quantities are not acceptable, in which case the Bid Form must be noted "BID IS FOR SPECIFIED QUANTITY ONLY." All awards made as a result of this bid shall conform to applicable Florida Statutes and the City Code.

1.9.4 Bid prices should be submitted with the understanding that the City is not authorized to pay service charges, which may be imposed due to the late payment of an invoice, which has become delinquent.

1.9.5 The City shall award a contract to a Bidder through action taken by the City Commission of the City of Cooper City (the "City Commission") at a duly authorized meeting.

1.9.6 The General Terms and Conditions, the Special Conditions, the Technical Specifications, the project drawings, the Bidder's Proposal, the Contract referenced, and the Work



Authorizations are collectively an integral part of the contract between the City and the successful Bidder.

1.9.7 While the City Commission may determine to award a contract to a Bidder(s) under this Solicitation, said award may be conditional on the subsequent submission of other documents as specified in the Bid Form of this solicitation. The Bidder shall be in default of the contractual obligations if any of these documents are not submitted in a timely manner and in the form(s) required by the City. If the Bidder is in default, the City, through the Purchasing Division, will void its acceptance of the Bidder's offer and may determine to accept the offer from the second most responsive, responsible Bidder or re-solicit Bids. The City may, at its sole option, seek monetary restitution from the Bidder as a result of damages or excess costs sustained and/or may prohibit the Bidder from submitting future Bids for a period of one year.

1.9.8 (This subsection is not applicable to this Project) The City reserves the right to automatically extend the contract for a maximum period not to exceed one-hundred and eighty (180) calendar days, in order to provide City departments with continual service and supplies while a new contract is being solicited, evaluated and/or awarded. If this right is exercised, the City shall notify the Bidder, in writing, of its intent to extend the contract for a definitive period of time prior to the effective date of the extension. By affixing its authorized signature to this Bid Form, the Bidder hereby acknowledges and agrees to this right of the City.

1.10 INVOICES/PAYMENT

Invoices documenting completed work shall be submitted at the completion of each request for work and must contain detailed information including the location and amount of work performed. Contractor shall submit an exact listing of completed work with submission of invoice for payment.

Cooper City will withhold retainage in accordance with Florida Statute 255.075 for contracts with construction services. Retainage is calculated on the total contract cost which includes any change orders pre-approved by the City.

Every effort will be made by the City to remit payment within 25 business days of the invoice date, after satisfactory inspection by the using department. BIDDERS WILL NOT BE PERMITTED TO PICK UP CHECKS FROM THE CITY. ALL CHECKS WILL BE MAILED TO THE CONTRACTOR'S REMIT TO ADDRESS ON FILE.

Invoices shall be emailed MONTHLY to AccountsPayable@CooperCity.gov, or sent via US Mail to City of Cooper City, 9090 SW 50th Place, Cooper City, FL 33328. All invoices must reference the applicable Work Authorization and/or Bid number.

All payments shall be governed by the Local Government Prompt Payment Act, as set forth in Part VII, Chapters 218, Florida Statutes.



1.11 INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact the Purchasing Division via email Purchasing@CooperCityFL.org. Such contact shall be for clarification purposes only. Material changes, if any, to the Scope of Services or bidding procedures will only be transmitted by written addendum.

All questions must be submitted in writing. Questions of a material nature must be received prior to the cut-off date specified in the Bid Schedule. No part of your bid can be submitted via fax or e-mail.

1.12 WRITTEN CONTRACT

The awarded Bidder/Proposer shall be required to enter into a written Contract with the City. The Contract form shall be prepared by the City and shall incorporate the terms of this solicitation, the accepted Bid, and include a termination for convenience clause, liquidated damages clause and other terms which may be required by the City and acceptable by the City Commissioners. The Contract shall be substantially in the form attached to this solicitation. No work shall be performed or payment due unless a written Contract is fully executed and approved by the City Commissioners.

1.13 DEFINED TERMS

Terms used in these Instructions to Bidders which are defined in Article 1 of the Contract the have the meanings assigned to them in the General Conditions. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

1.14 BID/PROPOSAL BOND

Bids/Proposals **MUST** be accompanied by a Bid/Proposal security made payable to the City in an amount equal to five percent (5%) of the Bidder's or Proposer's maximum Bid/Proposal price and in the form of a certified check, bank money order, or a Bid/Proposal Bond (Attached) issued by an authorized surety.

The Bid/Proposal security of the Awarded Contractor will be retained until such Proposer has executed the Contract Documents, furnished the required contract security (Public Construction Bond) and met the other conditions of the Notice of Award, whereupon the Bid/Proposal Security will be returned. If the Awarded Contractor fails to execute and deliver the Contract Documents and furnish the required security within ten (10) days of the issuance of the Notice of Award, the City may consider Proposer to be in default, annul the Notice of Award, and the Bid/Proposal



security of that Proposer shall be forfeited. Such forfeiture shall be City's exclusive remedy if Proposer defaults. The Bid/Proposal security of Proposers whom the Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective date of the Agreement or 61 days after the Bid/Proposal opening, whereupon the Bid/Proposal security furnished by such Proposers will be returned.

The Bid/Proposal security of Proposers whom the City believes do not have a reasonable chance of receiving the award will be returned within 21 days after the award.

THIS BID MUST BE ACCOMPANIED BY A BID BOND MADE PAYABLE TO THE CITY OF COOPER CITY, IN THE AMOUNT EQUAL TO FIVE PERCENT (5%) OF THE BID PRICE.

[END OF SECTION]



SECTION II – SOLICITATION SCHEDULE

| Item | Date |
|--|----------------------------|
| Release Bid | Friday, October 27, 2023 |
| A MANDATORY pre-bid meeting (2:00 PM EST and located at the Cooper City Public Works Department located at 9070 SW 51 st Street, Cooper City, FL 33328) | Thursday, November 9, 2023 |
| Last Date for Receipt of Questions of a Material Nature | Monday, November 20, 2023 |
| BIDS DUE (Prior to 3:00PM EST) | Monday, November 27, 2023 |
| Recommendation of Award issued to City Commission | TBD |
| Anticipated Award of Contract by City Commission | TBD |

[END OF SECTION]



SECTION III – GENERAL CONDITIONS

These instructions are standard for all contracts for commodities or services issued through the City of Cooper City Finance Department – Purchasing Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Special Conditions, Technical Specifications, Instructions, Bid Pages, Addenda, and Legal Advertisement.

ARTICLE 1. CONTRACT DOCUMENTS

- 1.1. The Contract Documents shall be followed in strict accordance as to Work, performance, material(s), and dimensions, except when Consultant may authorize, in writing, an exception.
- 1.2. Dimensions given in figures shall predominate over scaled measurements from the Drawings; however, any discrepancies regarding figures shall be resolved by Consultant. Contractor shall not proceed when in doubt as to any dimension or measurement, but shall seek clarification from Consultant.

ARTICLE 2. INTENTION OF CITY

City intends to describe in this Contract a functionally complete Project (or part thereof) to be constructed in accordance with this Contract and in accordance with all codes and regulations governing construction of the Project. The Work is a description of Contractor's obligations and responsibilities and is deemed to include preliminary considerations and prerequisites, as well as all labor, materials, equipment, and tasks, that are such an inseparable part of the Work described that exclusion of them from the Work would render performance by Contractor impractical, illogical, or unconscionable, and shall be supplied by Contractor whether or not specifically called for. When words that have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such words shall be interpreted in accordance with that meaning, unless specified otherwise herein. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws, or regulations in effect at the time of opening of bids for the Project. Contractor shall comply with such specifications, manuals, codes, laws, or regulations. City will have no duties other than those duties and obligations expressly set forth within this Contract.

ARTICLE 3. PRELIMINARY MATTERS

- 3.1. At least five (5) days prior to the pre-construction meeting described in Section 3.2, Contractor shall submit to Consultant for Consultant's review and acceptance:
 - 3.1.1. A preliminary progress schedule.
 - 3.1.2. A preliminary schedule of Shop Drawing submissions; and



3.1.3. In a lump sum contract or in a contract that includes lump sum bid items of Work, a preliminary schedule of values for all of the Work that includes quantities and prices of items aggregating the Contract Price, in as much detail as may be requested by City in writing, and that subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during construction.

In addition, after award but prior to the submission of the progress schedule, Consultant, Contract Administrator, and Contractor shall meet with all utility owners and secure from them a schedule of utility relocation; provided, however, that neither Consultant nor City of Cooper City shall be responsible for the nonperformance by the utility owners.

3.2. At a time specified by Consultant, but before Contractor starts the Work at the Project site, a conference attended by Contractor, Consultant, and others as deemed appropriate by Contract Administrator, will be held to discuss the schedules referred to in Section 3.1; to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment; and to establish a working understanding among the Parties as to the Work.

3.3. Within thirty-five (35) days after the Project Initiation Date set forth in the applicable Notice to Proceed, a conference attended by Contractor, Consultant, and others, as appropriate, will be held to finalize the schedules submitted in accordance with Section 3.1. Within forty-five (45) days after the Project Initiation Date set forth in the applicable Notice to Proceed, Contractor shall revise the original schedule submittal to address all review comments from the progress schedule review conference and resubmit a revised progress schedule to Consultant for review. Consultant's acceptance of the finalized progress schedule shall only be with respect to the orderly progression of the Work to completion within the Contract Time, but such acceptance shall not constitute acceptance by City of Cooper City or Consultant of the means or methods of construction or of the sequencing or scheduling of the Work. Such acceptance will neither impose on Consultant or City of Cooper City responsibility for the progress or scheduling of the Work, nor relieve Contractor from full responsibility therefor. The finalized schedule of Shop Drawing submissions must be acceptable to Consultant as providing a workable arrangement for processing such submissions. The finalized schedule of values must be acceptable to Consultant as to form and substance.

ARTICLE 4. PERFORMANCE BOND AND PAYMENT BOND

4.1. Within ten (10) days after being notified of the award, Contractor shall furnish a Performance Bond and a Payment Bond containing all the provisions of the Performance Bond (Form 1) and Payment Bond (Form 2). The payment bond shall be in the amount of one hundred percent (100%) of the Contract Price and performance bond shall be in the amount of one hundred and ten percent (110%) of the Contract Price guaranteeing to City of Cooper City the completion and performance of the Work covered in such Contract as well as full payment of all



suppliers, laborers, and Subcontractors employed pursuant to this Project. Each Bond shall be with a surety company that is qualified pursuant to Article 5.

4.2. Each Bond shall continue in effect for one (1) year after Final Completion and acceptance of the Work with liability equal to one hundred ten percent (110%) of the Contract Price, or an additional bond provided to ensure that Contractor will, upon notification by City, correct any defective or faulty Work or materials that appear within one (1) year after Final Completion of this Contract.

4.3. Pursuant to the requirements of Section 255.05, Florida Statutes, Contractor shall ensure that the bond(s) referenced above shall be recorded in the Official Records of Broward County and provide City of Cooper City with evidence of such recording.

4.4. In lieu of a Performance Bond and a Payment Bond, Contractor may furnish alternate forms of security in the form of cash, money order, certified check, cashier's check, or unconditional letter of credit. Such alternate forms of security shall be subject to the approval of City of Cooper City and for same purpose, and shall be subject to the same conditions as those applicable above, and shall be held by City of Cooper City for one (1) year after completion and acceptance of the Work.

ARTICLE 5. QUALIFICATION OF SURETY

5.1. For all Bid Bonds, Performance Bonds, and Payment Bonds over \$200,000.00:

5.1.1. Each bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida as surety, having a resident agent in the State of Florida, and having been in business with a record of successful continuous operation for at least the past five (5) years.

5.1.2. The surety company shall hold a current Certificate of Authority as acceptable surety on federal bonds in accordance with United States Department of Treasury Circular 570, Current Revisions. If the amount of the Bond exceeds the underwriting limitation set forth in the circular, in order to qualify as a proper surety herein, the net retention of the surety company shall not exceed the underwriting limitation in the circular, and the excess risks must be protected by coinsurance, reinsurance, or other methods in accordance with Treasury Circular 297, Revised (31 C.F.R. §§ 223.10, 223.11). Further, the surety company shall provide City of Cooper City with evidence satisfactory to City of Cooper City that such excess risk has been protected in an acceptable manner.

5.1.3. A surety company that is rejected by City of Cooper City may be substituted by the Bidder or proposer with a surety company acceptable to City, but only if the bid amount does not increase.



5.1.4. All bonds shall be written through surety insurers authorized to do business in the State of Florida as surety, with the following qualifications according to the latest edition of Best’s Insurance Guide, published by AM Best Company, Oldwick, New Jersey:

| Amount of Bond | Minimum Policy Holder’s Ratings Strength/Financial Size |
|------------------------------------|--|
| \$500,001 to \$2,500,000 | |
| | A / VI |
| \$2,500,001 to \$5,000,000 | A / VII |
| \$5,000,001 to \$10,000,000 | A / VIII |
| Over \$10,000,000 | A / IX |

5.2. For projects that do not exceed \$200,000.00, City of Cooper City may accept a Bid Bond, Performance Bond, or Payment Bond from a surety company that has twice the minimum surplus and capital required by the Florida Office of Insurance Regulation at the time the solicitation is issued, if the surety company is otherwise in compliance with the provisions of the Florida Insurance Code, and if the surety company holds a currently valid Certificate of Authority issued by the United States Department of the Treasury under Sections 9304 to 9308 of Title 31 of the United States Code. The Certificate and Affidavit (Form 4) so certifying should be submitted with the Bid Bond, Performance Bond, or Payment Bond.

5.3. More stringent requirements of any grantor agency may be set forth within the Supplemental Conditions. If there are no more stringent requirements, the provisions of this article shall apply.

ARTICLE 6. INDEMNIFICATION

Contractor shall indemnify and hold harmless City of Cooper City and its current, past, and future officers and employees (collectively, “Indemnified Party”), from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys’ fees (collectively, a “Claim”), to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Contractor or persons employed or utilized by Contractor in the performance of this Contract, including but not limited to Contractor’s Subcontractors, sub-subcontractors, materialmen, or agents of any tier, or any of their respective employees. To the extent considered necessary by Contract Administrator and City of Cooper City Attorney, any sums due Contractor under this Contract may be retained by City of Cooper City until all of City’s claims for indemnification pursuant to this Contract have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by City. These indemnifications shall survive the term of this Contract.



ARTICLE 7. INSURANCE REQUIREMENTS

7.1. The specific insurance coverage requirements for this project are identified in the Minimum Insurance Requirements Attachment J, which is a part of the Contract Documents. For purposes of this article, the term “City” shall include City of Cooper City and its members, officials, officers, and employees.

7.2. For the duration of the Contract, Contractor shall, at its sole expense, maintain at least the minimum limits of insurance coverage designated in the Contract Documents (inclusive of any amount provided by an umbrella or excess policy) in accordance with the terms and conditions stated in this article. The required insurance coverage shall be primary and non-contributory, and 'per occurrence' based. If Contractor maintains broader coverage or higher limits than the insurance requirements stated in Attachment J, City of Cooper City shall be entitled to all such broader coverages and higher limits. City of Cooper City reserves the right at any time to review and adjust the limits and types of coverage required under this article. Contractor shall add City of Cooper City as an additional insured on all required insurance coverage.

7.3. Contractor shall maintain insurance coverage against claims relating to any act or omission by Contractor, its agents, representatives, employees, or Subcontractors in connection with the Contract. All required insurance under this article shall provide primary coverage, list City of Cooper City as an additional insured, and shall not require contribution from any City of Cooper City insurance, self-insurance or otherwise. All insurance held by City, as well as City's self-insurance, shall be in excess of and shall not contribute to the insurance provided by Contractor. Unless prohibited by the applicable policy, Contractor waives any right to subrogation that any of Contractor's insurers may acquire against City, and agrees to obtain same in an endorsement on all lines of insurance required of Contractor under this article including any excess or umbrella policies.

7.4. All required insurance policies must be placed with insurers or surplus line carriers authorized to conduct business in the State of Florida with an A.M. Best rating of A- or better and a financial size category class VII or greater, unless otherwise approved by City's Risk Management Division in writing.

7.5. Contractor shall declare in writing any self-insured retentions or deductibles over the limit(s) prescribed in Attachment J, and shall submit same to City, at least fifteen (15) days prior to the effective date of the Contract or commencement of the Work for City's written approval of such retentions or deductibles. Contractor shall be solely responsible for and shall pay any deductible or self-insured retention applicable to any claim against City. City of Cooper City may, at any time, require Contractor to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. Contractor agrees that any deductible or self-insured retention may be satisfied by either the named insured or City, if so elected by City, and Contractor agrees to obtain same in endorsements to the required policies.



7.6. To the extent insurance requirements are designated in the Minimum Insurance Requirements, the applicable policies shall comply with the following:

7.6.1. Commercial General Liability Insurance. Policy shall be no more restrictive than that provided by the latest edition of the standard Commercial General Liability Form (Form CG 00 01) as filed for use in the State of Florida by the Insurance Services Office (ISO), with the exception of endorsements specifically required by ISO or the State of Florida, and liability arising out of: Mold, fungus, or bacteria; Terrorism; Silica, asbestos or lead; Sexual molestation; and Architects and engineers professional liability, unless coverage for professional liability is specifically required by this Contract. City of Cooper City and Consultant shall be included on the policy (and any excess or umbrella policy) as “Additional Insureds” on a form no more restrictive than ISO form CG 20 10 (Additional Insured – Owners, Lessees, or Contractor).

7.6.2. Contractor shall maintain products or completed work coverage for a minimum of three (3) years from the date of the final completion of the Work, unless otherwise stated in the Insurance Requirements Exhibit. In that case, the term specified in the Insurance Requirements shall govern the duration of the coverage required by this paragraph.

7.6.3. Business Automobile Liability Insurance. Policy shall be no more restrictive than that provided by Section II (Liability Coverage) of the most recent version of the standard Business Auto Policy (ISO Form CA 00 01) without any restrictive endorsements, including coverage for liability contractually assumed, and shall cover all owned, non-owned, and hired autos used in connection with the performance of Work under this Contract. City of Cooper City and Consultant shall be included on the policy (and any excess or umbrella policy) as “Additional Insureds.”

7.6.4. Workers’ Compensation/Employer’s Liability Insurance. Such insurance shall be no more restrictive than that provided by the latest edition of the standard Workers’ Compensation Policy, as filed for use in Florida by the National Council on Compensation Insurance (NCCI), with the exception of endorsements required by NCCI or the State of Florida. The policy must be endorsed to waive the insurer’s right to subrogate against City of Cooper City in the manner which would result from the attachment of the NCCI form “Waiver of our Right to Recover from Others Endorsement” (Advisory Form WC 00 03 13) with City of Cooper City scheduled thereon. Where appropriate, coverage shall be included to the extent required by Applicable Law, including, but not limited to, the Federal Employer’s Liability Act, the Jones Act, and the Longshoreman and Harbor Workers’ Compensation Act.

If Contractor provides all or a portion of the Workers’ Compensation/Employer’s Liability insurance required herein via a professional employer organization (“PEO”) or employee leasing company, any such Workers’ Compensation/Employer’s Liability insurance provided will only be deemed acceptable solely for the purposes of insuring Contractor’s enrolled employees. In addition, and notwithstanding the foregoing, in order to



adequately protect City of Cooper City against injuries to uninsured employees of Subcontractors and non-enrolled employees of Contractor, Contractor must still procure, maintain, and furnish City of Cooper City with evidence of a stand-alone separate Workers' Compensation/Employer's Liability insurance policy issued with Contractor as an additional insured, and complying with all requirements for Contractor provided Workers' Compensation contained in the Contract Documents. It is permissible for Contractor to exclude payroll of leased employees from such separate Workers' Compensation/Employer's Liability insurance policy.

7.6.5. Professional Liability Insurance. Such insurance shall cover Contractor for those sources of liability arising out of the rendering or failure to render professional services in the performance of the services required in this Contract.

7.6.6. Cyber Liability, or Technology Errors and Omissions Insurance. Coverage is required for any system connected to, and, or accessible from the internet. Coverage may be included as part of the required Professional Liability Insurance. Such policy shall cover, at a minimum, the following: Data Loss and System Damage Liability; Security Liability; Privacy Liability; Privacy/Security Breach Response coverage, including Notification Expenses.

7.6.7. Environmental Pollution Liability. Such insurance shall include clean-up costs and provide coverage to Contractor for liability resulting from pollution or other environmental impairment arising out of, or in connection with, Work performed under this Contract, or which arises out of, or in connection with this Contract, including coverage for clean-up of pollution conditions and third-party bodily injury and property damage arising from pollution conditions. Such insurance shall also include Transportation Coverage and Non-Owned Disposal Sites coverage. Should policy provide coverage on a claims-made basis, the coverage shall be in force and effect to respond to all claims reported within at least three years following the period for which coverage is required, unless a longer period is indicated in the Minimum Insurance Requirements, and which claims would have been covered had the coverage been provided on an occurrence basis.

7.6.8. Property Insurance, Builder's Risk, or Installation Floater. Such insurance shall be in force and evidenced to City of Cooper City as a condition precedent to the Notice to Proceed for construction. Coverage shall be "All Risks," Completed Value form with a deductible not to exceed Ten Thousand Dollars (\$10,000) for each claim for all perils except wind and flood. For the perils of wind and flood, Contractor shall maintain a deductible that is commercially feasible but which does not exceed five percent (5%) of the "values at risk at the time of loss" unless otherwise approved by City of Cooper City.

Sublimits: With respect to coverage for the peril of wind, the policy shall not be subject to any sublimit less than Fifty Million Dollars (\$50,000,000) per occurrence. With respect to the peril of Flood, the policy shall not be subject to any sublimit less than Ten Million



Dollars (\$10,000,000) per occurrence. Any sublimit for wind or flood lower than those identified in the foregoing must be approved by City.

Waiver of Occupancy Clause or Warranty-Policy must be specifically endorsed to eliminate any "Occupancy Clause" or similar warranty or representation that the building(s), addition(s) or structure(s) in the course of construction shall not be occupied without specific endorsement of the policy. The policy must be endorsed to provide that the Builder's Risk coverage will continue to apply until final acceptance of the building(s), addition(s) or structure(s) by City of Cooper City.

City of Cooper City reserves the right to purchase or provide property insurance covering the materials, equipment and supplies that are intended for specific installation in the Project while such materials, equipment and supplies are located at the Project site (this coverage will be specifically to cover property under construction or similar coverage), in transit, and while temporarily located away from the Project site for the purpose of repair, adjustment or storage at the risk of one (1) of the insured parties. This coverage will not cover any of Contractor's or Subcontractors' tools, equipment, machinery or provide any business interruption or time element coverage to the contractors. If City of Cooper City elects to purchase property insurance or provide for coverage under its existing insurance for this Project, then in that case, the insurance required to be carried by Contractor may be modified to account for the insurance being provided by City of Cooper City, at City of Cooper City's discretion. Such modification may also include execution of Waiver of Subrogation documentation. If a claim with respect to this Project is made upon City's insurance policy, Contractor shall be responsible for up to the first Fifty Thousand Dollars (\$50,000) of the deductible amount for such claim.

7.7. On or before the effective date of the Contract, or at least fifteen (15) days prior to commencement of the Work, as requested by City of Cooper City, Contractor shall provide City of Cooper City with a copy of all Certificates of Insurance or other documentation sufficient to demonstrate the insurance coverage required in this article.

7.8. Contractor shall ensure that all insurance coverages required by this article remain in full force and effect without any lapse in coverage for the duration of this Contract and until all performance required by Contractor has been completed, as determined by Contract Administrator. Contractor shall provide notice to City of Cooper City of any cancellation or modification of any required policy at least thirty (30) days prior to the effective date of cancellation or modification, and at least ten (10) days prior to the effective date of any cancellation due to nonpayment, and shall concurrently provide City of Cooper City with a copy of its updated Certificates of Insurance evidencing continuation of the required coverage(s).

7.9. If and to the extent requested by City of Cooper City, Contractor shall provide to City of Cooper City complete, certified copies of all required insurance policies and all required endorsements within thirty (30) days after City's request.



7.10. Contractor shall ensure that “City of Cooper City, 9090 SW 50th Place, Cooper City, Florida 33328” and Consultant are listed as additional insureds on all policies required under this article. City of Cooper City shall be listed as Certificate Holder.

7.11. Contractor shall require each Subcontractor to maintain insurance coverage that adequately covers the Work provided by that Subcontractor on substantially the same insurance terms and conditions required of Contractor under this article. Contractor shall ensure that all such Subcontractors comply with these requirements and that “City of Cooper City” and Consultant are named as additional insureds under the Subcontractors’ applicable insurance policies. If Contractor or any Subcontractor fails to maintain the insurance required by the Contract Documents, City of Cooper City may pay any costs of premiums necessary to maintain the required coverage and deduct such costs from any payment otherwise due to Contractor. Contractor shall not permit any Subcontractor to provide services under the Contract unless and until the requirements of this section are satisfied. If requested by City of Cooper City, Contractor shall provide, within one (1) business day, evidence of each Subcontractor’s compliance with this article.

ARTICLE 8. LABOR AND MATERIALS

8.1. Unless otherwise provided herein, Contractor shall provide and pay for all Materials, labor, water, tools, equipment, light, power, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work.

8.2. Contractor shall at all times enforce strict discipline and good order among its employees and Subcontractors at the Project site, and shall not employ on the Project any unfit person or anyone not skilled in the Work to which they are assigned.

ARTICLE 9. ROYALTIES AND PATENTS

All fees, royalties, and claims for any invention, or pretended inventions, or patent of any article, material, arrangement, appliance, or method that may be used upon or in any manner be connected with the construction of the Work or appurtenances, are hereby included in the prices stipulated in this Contract for said Work.

ARTICLE 10. WEATHER

Extensions to the Contract Time for delays caused by the effects of inclement weather shall be submitted as a request for a change in the Contract Time pursuant to Article 40. Time extensions are justified only when rain, other inclement weather conditions, or related adverse soil conditions result in Contractor being unable to work at least fifty percent (50%) of the normal workday on controlling items of Work identified on the accepted schedule or updates to that schedule.



ARTICLE 11. PERMITS, LICENSES, AND IMPACT FEES

11.1. Except as otherwise provided within the Special Instructions for Vendors, Contractor shall secure and pay for all necessary permits and licenses required for the Work pursuant to by Applicable Law. Contractor shall be reimbursed for only the actual amount of the permit fees levied by the permitting authority and paid by the Contractor as evidenced by an invoice or other acceptable documentation issued by the permitting authority. Reimbursement to Contractor shall be on a pass-through basis and shall not include profit or overhead of Contractor. Contractor shall have and maintain appropriate Certificate(s) of Competency, valid for the Work to be performed and valid for the jurisdiction in which the Work is to be performed, for all persons working on the Project for whom a Certificate of Competency is required.

11.2. City of Cooper City shall directly pay for all impact fees levied by any municipal governmental entity with jurisdiction.

ARTICLE 12. RESOLUTION OF DISPUTES

12.1. Any actual or prospective bidder, proposer, offeror, or contractor who is aggrieved in connection with this solicitation or the award of the resulting contract may protest to the City's Procurement Division. Protests shall be submitted in writing to the Purchasing Division no later than five (5) business days after such aggrieved person knows or should have known of the facts giving rise thereto. The decision of the Purchasing Agent shall be final unless within three (3) business days from the receipt of the decision, the protestant files a written appeal with the City Manager. The Purchasing Division shall act as the City's representative, in the issuance and administration of all contracts, and shall issue and receive all documents, notices, and all correspondence relating to the bidding process. All costs accruing from a Bid/Proposal or award challenge shall be assumed by the challenger. The decision of the City Manager shall be final and conclusive. The City Manager's decision shall be binding on all parties concerned, subject to review only on the grounds that it constitutes arbitrary action, in a court of competent jurisdiction in Broward County in accordance with laws of the State of Florida.

12.2. To prevent all disputes and litigation, the Parties agree that Consultant shall decide all questions, claims, difficulties, and disputes of whatever nature that may arise relative to the technical interpretation of the Contract Documents or fulfillment of the Contract as to the character, quality, amount, and value of any Work done or materials furnished, or proposed to be done or furnished, under or by reason of the Contract Documents, and Consultant's decisions of all claims, questions, difficulties, and disputes shall be final and binding to the extent provided in Section 12.2. Any claim, question, difficulty, or dispute that cannot be resolved by agreement of the Contract Administrator and Contractor shall be submitted to Consultant in writing within five (5) days after the date of impasse. Unless a different period of time is set forth in this Contract, Consultant shall notify the Contract Administrator and Contractor in writing of Consultant's decision within fourteen (14) days after the date of the receipt of the claim, question, difficulty, or dispute, unless Consultant requires additional time to gather information or allow the Parties to provide additional information. Except for disputes directly related to the



promptness of payment as set forth in Section 5.1 of the Contract, all nontechnical administrative disputes shall be determined by the Contract Administrator pursuant to the time periods provided herein. During the pendency of any dispute and after a determination thereof, Contractor, Consultant, and Contract Administrator shall act in good faith to mitigate any potential damages, including utilization of construction schedule changes and alternative means of construction.

12.3. If the determination of a dispute under this article is unacceptable to either party, the party objecting to the determination must notify the other party in writing within ten (10) days of receipt of the written determination. The notice must state the basis of the objection and must be accompanied by a statement that any Contract Time or Contract Price adjustment claimed is the entire adjustment to which the objecting party has reason to believe it is entitled to as a result of the determination. Within sixty (60) days after Final Completion of the Work, the Parties shall participate in mediation to address all objections to any determinations and to attempt to prevent litigation. Neither party shall commence litigation prior to the expiration of the sixty (60) day mediation period. The mediator shall be mutually agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under State law. **A PARTY SPECIFICALLY WAIVES ALL OF ITS RIGHTS, INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR CONTRACT TIME AND CONTRACT PRICE ADJUSTMENTS PROVIDED IN THE CONTRACT, INCLUDING ITS RIGHTS AND REMEDIES UNDER STATE LAW, IF SAID PARTY FAILS TO COMPLY IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS ARTICLE.**

ARTICLE 13. INSPECTION OF WORK

13.1. Consultant and City of Cooper City shall at all times have access to the Work, and Contractor shall provide proper facilities for such access and for inspecting, measuring, and testing.

13.1.1. Should the Contract Documents, Consultant's instructions, or Applicable Law require any of the Work to be specially tested or approved, Contractor shall give Consultant timely notice of readiness of the Work for testing. If the testing or approval is to be made by an authority other than City, timely notice shall be given of the date fixed for such testing. Testing shall be performed promptly, and, where practicable, at the source of supply. If any of the Work is covered up without approval or consent of Consultant, it must, if required by Consultant, be uncovered for examination and properly restored at Contractor's expense.

13.1.2. Reexamination of any of the Work may be ordered by Consultant with prior written approval by the Contract Administrator, and if so ordered, the Work must be uncovered by Contractor. If such Work is found to be in accordance with this Contract, City of Cooper City shall pay the cost of reexamination and replacement by means of a Change Order. If such Work is not in accordance with this Contract, Contractor shall pay such cost.



13.2. Inspectors shall have no authority to permit deviations from, or to relax or waive, any of the provisions of the Contract Documents, or to delay the Project by failure to inspect the materials and Work with reasonable promptness, without the written permission or instruction of Consultant.

13.3. The payment of any compensation, the giving of any gratuity, or the granting of any favor, of any character or form, by Contractor to any inspector, directly or indirectly, is strictly prohibited, and any such act on the part of Contractor will constitute a breach of this Contract.

ARTICLE 14. SUPERINTENDENCE AND SUPERVISION

14.1. City's instructions are to be given through Consultant, which instructions Contractor must strictly and promptly follow in every case. Contractor shall keep on the Project a full-time, competent, English-speaking superintendent and any necessary assistants, all of whom must be satisfactory to Consultant. The superintendent shall not be changed except with the written consent of Consultant, unless the superintendent proves to be unsatisfactory to Contractor and ceases to be in its employ. The superintendent shall represent Contractor; all instructions given to the superintendent shall be as binding as if given to Contractor, and will be confirmed in writing by Consultant upon the written request of Contractor. Contractor shall provide efficient supervision of the Work, using its best skill and attention.

14.2. On a daily basis, Contractor's superintendent shall record, at a minimum, the following information in a bound log: the day; date; weather conditions and how any weather condition affected progress of the Work; time of commencement of Work for the day; the Work being performed; materials, labor, personnel, equipment and Subcontractors at the Project site; visitors to the Project site, including representatives of City, Consultant, or regulatory representatives; any event that caused or contributed a delay to the critical path of the Project; any special or unusual conditions or occurrences encountered; and the time of termination of Work for the day. All information shall be recorded in the daily log in ink, unless otherwise approved by Consultant. The daily log shall be kept on or accessible from the Project site and shall be available at all times for inspection and copying by City of Cooper City and Consultant.

14.3. The Contract Administrator, Contractor, and Consultant shall meet at least every two (2) weeks (or as otherwise determined by the Contract Administrator) during the course of the Work to review and agree upon the Work performed to date and to establish the controlling items of Work for the next two (2) weeks. Consultant shall publish, keep, and distribute minutes and any comments thereto of each such meeting.

14.4. If Contractor, in the course of performing the Work, finds any discrepancy between this Contract and the physical conditions of the locality, or any errors, omissions, or discrepancies in this Contract, it shall be Contractor's duty to immediately inform Consultant, in writing, and Consultant will promptly review same. Any Work done after such discovery, until authorized, will be done at Contractor's sole risk, without entitlement to reimbursement or compensation.



14.5. 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 this Contract. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

ARTICLE 15. CITY'S RIGHT TO TERMINATE CONTRACT

15.1. The Contract Administrator may give notice in writing to Contractor and its Surety of delay, neglect, or default, specifying the same with a notice to cure, upon the occurrence of any of the following:

15.1.1. Contractor fails to begin the Work within fifteen (15) days after the Project Initiation Date;

15.1.2. Contractor fails to perform the Work with sufficient workers, equipment, or materials to ensure the prompt completion of the Work;

15.1.3. Contractor performs the Work unsuitably or causes it to be rejected as defective and unsuitable;

15.1.4. Contractor discontinues performance of the Work in contravention of the accepted schedule;

15.1.5. Contractor fails to perform any material term set forth in this Contract;

15.1.6. Contractor becomes insolvent or declared bankrupt, commits any act of bankruptcy or insolvency, or makes an assignment for the benefit of creditors; or

15.1.7. From any other cause whatsoever, Contractor fails to carry on the Work in an acceptable manner.

15.2. If Contractor, within a period of ten (10) days after such notice, does not proceed to cure in accordance therewith, then City's awarding authority for this Contract may, upon written certification from Consultant of the fact of such delay, neglect, or default and Contractor's failure to comply with such notice, terminate the services of Contractor, exclude Contractor from the Project site and take the performance of the Work out of the hands of Contractor, and appropriate or use any or all materials and equipment on the Project site as may be suitable and acceptable. In such case, Contractor shall not be entitled to receive any further payment until the Project is completed. In addition, City of Cooper City may enter into an agreement for the completion of the Project according to the terms and provisions of this Contract, use such other methods as in the Contract Administrator's sole opinion shall be required for the completion of the Project according to the terms and provisions of this Contract, or use such other methods as in the Contract Administrator's sole opinion shall be required for the completion of the Project in an acceptable manner. All damages, costs, and charges incurred by City, together with the costs of completing the Project, shall be deducted from any monies due or which may become



due to Contractor. If the damages and expenses so incurred by City of Cooper City shall exceed the unpaid balance, Contractor shall be liable and shall pay to City of Cooper City the amount of said excess.

15.3. If City of Cooper City erroneously, improperly, or unjustifiably terminates for cause, such termination shall be deemed a termination for convenience and the rights and obligations of City of Cooper City and Contractor shall be the same as if the termination had been exercised pursuant to the Termination for Convenience clause as set forth in Section 15.4 below.

15.4. This Contract may be terminated for convenience, for any reason or no reason, in writing by the Board with at least ten (10) days' advance written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. Unless otherwise stated in this Contract, if this Contract was approved by Board action, termination for cause by City of Cooper City must be by action of the Board or the City Manager; in any other instance, termination for cause may be by the City Manager, the City of Cooper City representative expressly authorized under this Contract, or the City of Cooper City representative (including any successor) who executed the Contract on behalf of City. If this Contract is terminated by City of Cooper City pursuant to this section, Contractor shall be paid for all Work properly executed and actual expenses incurred prior to termination in addition to termination settlement costs reasonably incurred by Contractor relating to commitments that had become firm prior to the termination. Payment shall include reasonable profit for Work and services performed as limited by Article 39 hereof. All actual expenses incurred shall have sufficient back-up documentation to verify that such expenses were actually incurred by Contractor. No payment shall be made for profit for Work and services that Contractor has not performed. Contractor acknowledges that it has received good, valuable, and sufficient consideration for City's right to terminate this Contract for convenience including in the form of City's obligation to provide advance notice to Contractor of such termination in accordance with this Section 15.4.

15.5. Upon receipt of a notice of termination pursuant to Sections 15.2, 15.4, or 15.6, Contractor shall promptly discontinue all affected Work unless the notice of termination directs otherwise, and shall deliver or otherwise make available to City of Cooper City all data, drawings, specifications, reports, estimates, summaries, and such other information as may have been required by this Contract whether completed or in process.

15.6. This Contract may be terminated by the City:

15.6.1. If Contractor is a "scrutinized company" pursuant to Sections 215.473 or 215.4725, Florida Statutes, if Contractor is placed on a "discriminatory vendor list" pursuant to Section 287.134, Florida Statutes, or if Contractor is otherwise ineligible to transact business with City of Cooper City under Applicable Law or provides a false certification submitted pursuant to Section 287.135, Florida Statutes.



ARTICLE 16. SUSPENSION OF WORK

Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with City of Cooper City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements except as Contractor and City of Cooper City may otherwise agree in writing. Suspension of Work by Contractor during any dispute or disagreement with City of Cooper City shall entitle City of Cooper City to terminate this Contract for cause.

ARTICLE 17. PROJECT RECORDS AND RIGHT TO AUDIT

17.1. Audit Rights and Retention of Records. Contractor and all Subcontractors shall preserve all Contract Records (as defined below) for a minimum period of three (3) years after expiration or termination of this Contract or until resolution of any audit findings, whichever is longer. This article shall survive any dispute or litigation between the Parties, and Contractor expressly acknowledges and agrees to be bound by this article throughout the course of any dispute or litigation with City. Contract Records shall, upon reasonable notice, be open to City of Cooper City inspection and subject to audit and reproduction during normal business hours. City of Cooper City audits and inspections pursuant to this article may be performed by any City of Cooper City representative (including any outside representative engaged by City). City of Cooper City may conduct audits or inspections at any time during the term of this Contract and for a period of three years after the expiration or termination of this Contract (or longer if required by Applicable Law). City of Cooper City may, without limitation, verify information, payroll distribution, and amounts through interviews, written affirmations, and on-site inspection with Contractor's employees, Subcontractors, vendors, or other labor.

City of Cooper City shall have the right to audit, review, examine, inspect, analyze, and make copies of all Contract Records at a location within Broward County. City of Cooper City reserves the right to conduct such audit or review at Contractor's place of business, if deemed appropriate by City of Cooper City, with seventy-two (72) hours' advance notice. Contractor agrees to provide adequate and appropriate workspace for such review. Contractor shall provide City of Cooper City with reasonable access to Contractor's facilities, and City of Cooper City shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Contract. Contractor shall make all Contract Records available electronically in common file formats or via remote access if, and to the extent, requested by City of Cooper City.

17.2. Contract Records include any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, drawings, receipts, vouchers and memoranda, and any and all other documents that pertain to rights, duties, obligations, or performance under this Contract. Contract Records include hard copy and electronic records, written policies and procedures, time sheets, payroll records and registers, cancelled payroll checks, estimating work sheets, correspondence, invoices and related payment documentation, general ledgers, insurance rebates and dividends, and any



other records pertaining to rights, duties, obligations or performance under this Contract, whether by Contractor or Subcontractors, or otherwise necessary to adequately permit evaluation and verification of any or all of the following:

- a) Compliance with Contract
- b) Compliance with the City Code
- c) Compliance with Contract provisions regarding the pricing of Change Orders
- d) Accuracy of Contractor representations regarding the pricing of invoices
- e) Accuracy of Contractor representations related to claims submitted by Contractor including Subcontractors, or any of its other payees.

In addition to the normal documentation Contractor typically furnishes to City of Cooper City, in order to facilitate efficient use of City of Cooper City resources when reviewing or auditing Contractor’s billings and related reimbursable cost records, Contractor agrees to furnish (upon request) the following types of information in the specified computer readable file format(s):

| Type of Record | File format |
|--|----------------|
| Monthly Job Cost Detail | .pdf and Excel |
| Detailed Job Cost History to Date | .pdf and Excel |
| Monthly Labor Distribution detail (if not already separately detailed in the Job Cost Detail) | .pdf and Excel |
| Total Job to Date Labor Distribution detail (if not already included in the detailed Job Cost History to date) | .pdf and Excel |
| Employee Timesheets documenting time worked by all individuals who charge reimbursable time to the project | .pdf |
| Daily Foreman Reports listing names and hours and tasks of personnel who worked on the project | .pdf |
| Daily Superintendent Reports | .pdf |
| Detailed Subcontract Status Reports (showing original subcontract value, approved subcontract change orders, subcontractor invoices, payment to Subcontractors, etc. | .pdf and Excel |
| Copies of Executed Subcontracts with all Subcontractors | .pdf |
| Copies of all executed Change Orders issued to Subcontractors | .pdf |
| Copies of all documentation supporting reimbursable job costs (Subcontractor payment applications, vendor invoices, internal cost charges, etc.) | .pdf |

17.3. Contractor shall, by written contract, require all Subcontractors to agree to the requirements and obligations of this article.

17.4. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for City’s disallowance and recovery of any payment reliant upon such entry.



17.5. If an audit inspection or examination in accordance with this article reveals overpricing or overcharges to City of Cooper City of any nature by Contractor or its Subcontractors in excess of five percent (5%) of the total contract billings reviewed by City of Cooper City, in addition to making adjustments for the overcharges, Contractor shall pay the reasonable cost of City's audit. Any adjustments or payments due as a result of any such audit or inspection shall be made within thirty (30) days after presentation of City's findings to Contractor.

ARTICLE 18. RIGHTS OF VARIOUS INTERESTS

Whenever work being done by City's forces or by other contractors is contiguous to or within the limits of Work covered by this Contract, the respective rights of the various interests involved shall be established by the Contract Administrator to secure the completion of the various portions of the Work in general harmony.

ARTICLE 19. EXPLOSIVES

When the use of explosives is necessary in performance of the Work, Contractor shall exercise the utmost care in the handling and usage of such explosives for the protection of life and property. All explosives shall be stored in a safe manner in storage clearly marked "Dangerous-Explosives," and shall be placed in the care of competent watchmen. When the use of explosives becomes necessary, Contractor shall furnish to City of Cooper City proof of insurance coverage, adequately providing public liability and property damage insurance as a rider attached to its regular policies, unless otherwise included in the policies themselves.

ARTICLE 20. DIFFERING SITE CONDITIONS

If during the course of the Work Contractor encounters (1) subsurface or concealed conditions at the Project site that differ materially from those shown in the Contract Documents and from those ordinarily encountered and generally recognized as inherent in work of the character called for in this Contract; or (2) unknown physical conditions of the Project site, of an unusual nature, which differ materially from that ordinarily encountered and generally recognized as inherent in work of the character called for in this Contract, then Contractor, without disturbing the conditions and before performing any Work affected by such conditions, shall, within twenty-four (24) hours of their discovery, notify Contract Administrator and Consultant in writing of the existence of the aforesaid conditions. Consultant and Contract Administrator shall, within two (2) business days after receipt of Contractor's written notice, investigate the site conditions identified by Contractor. If, in the sole opinion of Contract Administrator, the conditions do materially so differ and cause an increase or decrease in Contractor's cost of, or the time required for, the performance of any part of the Work, whether or not charged as a result of the conditions, Contract Administrator may recommend an equitable adjustment to the Contract Price, or the Contract Time, or both. If Contract Administrator and Contractor cannot agree on an adjustment in the Contract Price or Contract Time, the adjustment shall be referred to Consultant for determination in accordance with the provisions of Article 12. No request by Contractor for an equitable adjustment to this Contract under this provision shall be allowed



unless Contractor has given written notice to Contract Administrator in strict accordance with the provisions of this article. **No request for an equitable adjustment or change to the Contract Price or Contract Time for differing site conditions shall be allowed if made after the date certified by Contract Administrator as the date of Substantial Completion.**

ARTICLE 21. PLANS AND WORKING DRAWINGS

City of Cooper City, through Consultant, shall have the right to modify the details of the plans and specifications and to supplement the plans and specifications with additional plans, drawings, or additional information as the Work proceeds, all of which shall be considered as part of this Contract. In case of disagreement between the written and graphic portions of this Contract, the written portion shall govern.

ARTICLE 22. CONTRACTOR TO CHECK PLANS, SPECIFICATIONS, AND DATA

Contractor shall verify all dimensions, quantities, and details shown on the plans, specifications or other data received from Consultant, and shall notify Consultant of all errors, omissions, or discrepancies found therein within three (3) days after discovery. Contractor will not be allowed to take advantage of any error, omission, or discrepancy to not stop or delay Work, because Consultant will advise Contractor how to proceed to avoid stoppage or delay of Work. Contractor shall not be liable for damages resulting from errors, omissions, or discrepancies in this Contract unless Contractor recognized such error, omission, or discrepancy, and failed to report it to Consultant.

ARTICLE 23. CONTRACTOR'S RESPONSIBILITY FOR DAMAGES AND ACCIDENTS

23.1. Contractor shall accept full responsibility for the Work against all loss or damage of whatsoever nature sustained until final acceptance by City of Cooper City, and shall promptly repair any damage done from any cause whatsoever, except as provided in Article 30.

23.2. Contractor shall be responsible for all Materials, equipment and supplies pertaining to the Project. If any such Materials, equipment or supplies are lost, stolen, damaged, or destroyed prior to final acceptance by City of Cooper City, Contractor shall replace same without cost to City, except as provided in Article 30.

ARTICLE 24. WARRANTY

24.1 Contractor warrants to City of Cooper City that all Materials and equipment furnished under this Contract will be new unless otherwise specified and that all of the Work will be of good quality, free from faults and defects, and in conformance with this Contract. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by Consultant, Contractor shall furnish satisfactory evidence as to the kind and quality of Materials and equipment. This warranty is not limited by the provisions of Article 26 herein.



24.2 Project specific warranty requirements for workmanship, materials and equipment furnished under this Contract are provided in the Project Technical Specifications

ARTICLE 25. SUPPLEMENTARY DRAWINGS

25.1. When, in the opinion of Consultant, it becomes necessary to explain the Work to be done more fully, or to illustrate the Work further, or to show any changes that may be required, supplementary drawings, with specifications pertaining thereto, will be prepared by Consultant.

25.2. The supplementary drawings shall be binding upon Contractor with the same force as this Contract. Where such supplementary drawings require either less or more than the original quantities of Work, appropriate adjustments shall be made by Change Order.

ARTICLE 26. DEFECTIVE WORK

26.1. Consultant has the authority to reject or disapprove Work that Consultant finds to be defective. If required by Consultant, Contractor shall promptly either correct all defective Work or remove such defective Work and replace it with non-defective Work. Contractor shall bear all direct, indirect, and consequential costs of such removal or corrections including cost of testing laboratories and personnel.

26.2. Should Contractor fail or refuse to remove or correct any defective Work or to make any necessary repairs in accordance with the requirements of this Contract within the time indicated in writing by Consultant, City of Cooper City shall have the authority to cause the defective Work to be removed or corrected, or make such repairs as may be necessary, at Contractor's expense. Any expense incurred by City of Cooper City in making such removals, corrections, or repairs, shall, at City's election, be paid for out of any monies due or which may become due to Contractor or charged against the Performance Bond. In the event of failure of Contractor to make all necessary repairs promptly and fully, City of Cooper City may declare Contractor in default.

26.3. If, within one (1) year after Substantial Completion or such longer period of time as may be prescribed by the terms of any applicable special warranty required by this Contract, or by any specific provision of this Contract, any of the Work is found to be defective or not in accordance with this Contract, Contractor, after receipt of written notice from City of Cooper City, shall promptly correct such defective or nonconforming Work within the time specified by City, without cost to City. Nothing contained herein shall be construed to establish a period of limitation with respect to any other obligation that Contractor might have under this Contract, including, but not limited to, Article 24 hereof and any claim regarding latent defects.

26.4. Failure to reject any defective Work or material shall not in any way prevent later rejection when such defect is discovered, nor shall such failure obligate City of Cooper City to final acceptance.



ARTICLE 27. TAXES

Contractor shall pay all applicable sales, consumer, use, and other taxes required by Applicable Law. Contractor is responsible for reviewing the pertinent state statutes involving state taxes and complying with all their requirements.

ARTICLE 28. SUBCONTRACTS

28.1. Each Subcontractor must possess certificates of competency and licenses required by Applicable Law. Contractor shall notify the Contract Administrator and Consultant of any change in Subcontractors.

28.2. Contractor shall not employ any Subcontractor against whom City of Cooper City or Consultant may have a reasonable objection. Contractor shall not be required to employ any Subcontractor against whom Contractor has a reasonable objection.

28.3. Contractor shall be fully responsible for all acts and omissions of its Subcontractors, persons directly or indirectly employed by its Subcontractors, and persons for whose acts any of its Subcontractors may be liable to the same extent that Contractor is responsible for the acts and omissions of persons directly employed by it. Nothing in this Contract shall create any contractual relationship between any Subcontractor and City of Cooper City or any obligation on the part of City of Cooper City to pay or to see the payment of any monies due any Subcontractor. City of Cooper City or Consultant may furnish to any Subcontractor evidence of amounts paid to Contractor on account of specific Work performed.

28.4. Contractor shall bind specifically every Subcontractor to the applicable terms and conditions of this Contract for the benefit of City.

28.5. Contractor shall perform the Work with its own organization, amounting to not less than Fifty percent (50%) of the Contract Price.

ARTICLE 29. SEPARATE CONTRACTS

29.1. City of Cooper City has the right to enter into contracts with other parties in connection with this Project. Contractor shall afford such other parties reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate this Work with theirs.

29.2. If any part of Contractor's Work depends for proper execution or results on the work of any third parties, Contractor shall inspect and promptly report to Consultant any defects in such work that render it unsuitable for such proper execution and results of Contractor's Work. Contractor's failure to so inspect and report shall constitute an acceptance of the third party's work as fit and proper for the performance of Contractor's Work, except as to defects which may develop in the third parties' work after the execution of Contractor's Work.



29.3. Contractor shall conduct its operations and take all reasonable steps to coordinate the prosecution of the Work so as to not interfere with or impact any other contractor on the site. Should such interference or impact occur, Contractor shall indemnify City of Cooper City from any liability to the affected contractor related to such interference or impact.

29.4. To ensure the proper execution of subsequent Work, Contractor shall inspect the Work already in place and shall immediately report to Consultant any discrepancy between the executed Work and the requirements of this Contract.

ARTICLE 30. USE OF COMPLETED PORTIONS

30.1. City of Cooper City has the right at its sole option to take possession of and use any completed or partially completed portions of the Project (“Designated Area”). Such possession and use shall not be deemed an acceptance of any of the Work not completed in accordance with this Contract. If such possession and use increase the cost of or delays the Work, Contractor shall be entitled to reasonable extra compensation or reasonable extension of time or both, as recommended by Consultant and approved by City.

30.2. If City of Cooper City decides to take possession of any completed or partially completed portions of the Project, the following shall occur:

30.2.1. City of Cooper City shall give notice to Contractor in writing at least thirty (30) days prior to City’s intended occupancy of a Designated Area.

30.2.2. Contractor shall complete to the point of Substantial Completion the Designated Area, including required training, and request inspection and issuance of a Certificate of Substantial Completion (Form 10) from Consultant.

30.2.3. Upon Consultant’s issuance of a Certificate of Substantial Completion for the Designated Area, City of Cooper City will assume full responsibility for maintenance, utilities, subsequent damages of City of Cooper City and public, adjustment of insurance coverages, and start of warranty for the Designated Area.

30.2.4. Contractor shall complete all items noted on the Certificate of Substantial Completion within the time specified by Consultant on the Certificate of Substantial Completion, and request final inspection and final acceptance of the portion of the Work occupied. Upon completion of final inspection and receipt of an application for final payment, Consultant shall issue a Final Certificate of Payment relative to the Designated Area.

30.2.5. If City of Cooper City decides to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy or use shall not commence prior to a time mutually agreed upon by City of Cooper City and Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. Insurance on the unoccupied or unused portion or



portions shall not be canceled or lapsed on account of such partial occupancy or use. Consent of Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.

ARTICLE 31. LANDS OF WORK

31.1. City of Cooper City shall provide, as may be indicated in this Contract, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands as are designated by City of Cooper City for the use of Contractor.

31.2. Contractor shall obtain, at Contractor's own expense and without liability to City, any additional rights to land and access thereto that may be required for temporary construction facilities, temporary easements, or for storage of materials. Contractor shall furnish to City of Cooper City copies of written permission obtained by Contractor from the owners of such land.

ARTICLE 32. LEGAL RESTRICTIONS AND TRAFFIC PROVISIONS

Contractor shall conform to and obey all Applicable Law with regard to labor, hours of work, and Contractor's operations. Contractor shall conduct its operations so as not to close any thoroughfare, nor interfere in any way with traffic on railway, highways, or water, without the written consent of the proper authorities.

ARTICLE 33. LOCATION AND DAMAGE TO EXISTING FACILITIES, EQUIPMENT, OR UTILITIES

33.1. Utility lines in the Project area have been shown on the Plans. However, City of Cooper City does not represent or warrant that all lines are shown, or that the ones indicated are in their true location. Contractor must identify and locate all underground and overhead utility lines or equipment affecting or affected by the Project. Contractor will not be entitled to any additional payment or extension of time due to discrepancies between actual location of utilities and Plan location of utilities.

33.2. Contractor shall notify each utility company with facilities in the Project site, at least thirty (30) days prior to the start of construction, to arrange for positive underground location, relocation, or support of its utility where that utility may be in conflict with or endangered by the Work. The cost of relocation of water mains or other utilities for the convenience of Contractor shall be paid by Contractor. All charges by utility companies for temporary support of its utilities shall be paid for by Contractor. All costs of permanent utility relocation to avoid conflict shall be the responsibility of the utility company involved. Contractor will not be entitled to any additional payment or extension of time for utility relocations, regardless of reason for relocation.

33.3. Contractor shall schedule the Work in such a manner that the Work is not delayed by the utility providers relocating or supporting their utilities. Contractor shall coordinate its activities with any and all public and private utility providers occupying the right-of-way. Contractor will not be entitled to any additional compensation or extension of time for any delay associated with utility relocation or support.



33.4. Contractor shall protect all overhead, surface, or underground structures and utilities from damage or displacement. Contractor will promptly and completely repair all damage to such structures within a reasonable time. All damaged utilities must be replaced or fully repaired to the satisfaction of the utility owner. All repairs are to be inspected by the utility owner prior to backfilling. City of Cooper City reserves the right to remedy such damage by making such repairs or causing such repairs to be made at the expense of Contractor. City's expense in causing such repairs shall be deducted from Contractor's next Application for Payment.

ARTICLE 34. VALUE ENGINEERING

Contractor may request substitution of Materials, articles, pieces of equipment, or any changes that reduce the Contract Price by making such request to Consultant in writing. Consultant will be the sole judge of the acceptability of any proposed substitute, and no substitute will be ordered, installed, used, or initiated without Consultant's prior written acceptance by a Change Order or an approved Shop Drawing. In no event will any substitution accepted by Consultant result in an increase in the Contract Price or Contract Time. By making a request for substitution, Contractor agrees to pay directly to Consultant all Consultant's fees and charges related to Consultant's review of the request for substitution, regardless of whether the request for substitution is accepted by Consultant. Any substitution submitted by Contractor must meet the form, fit, function, and life cycle criteria of the item proposed to be replaced, and there must be a reduction in Contract Price including Consultant review fees and charges. Unless otherwise indicated in the relevant Change Order, if a substitution is approved, the net dollar savings shall be shared equally between Contractor and City of Cooper City and processed as a deductive Change Order. City of Cooper City may require Contractor to furnish, at Contractor's expense, a special performance guarantee or other surety with respect to any substitute approved after award of this Contract.

ARTICLE 35. PAYMENT BY CITY FOR TESTS

Except when otherwise specified in the Contract Documents, the expense of all tests shall be borne by City of Cooper City and be performed by a testing firm selected by City. Contractor is responsible for reimbursement to City of Cooper City the costs of any required test in which the tested Work fails. For road construction projects, the procedure for making tests required by City of Cooper City will be in conformance with the most recent edition of the State of Florida, Department of Transportation Standard Specifications for Road and Bridge Construction.

ARTICLE 36. CHANGE IN THE WORK OR TERMS OF CONTRACT

36.1. Without invalidating this Contract and without notice to any surety, City has the right to make such increases, decreases, or other changes in the character or quantity of the Work as may be considered necessary or desirable by City to fully and acceptably complete the proposed Work in a satisfactory manner. Any extra or additional Work within the scope of this Project must be accomplished by means of appropriate Field Orders and Supplemental Instructions or Change Orders.



36.2. Any changes to the terms of this Contract must be contained in a written document, executed by the Parties hereto, with the same formality and of equal dignity as this Contract prior to the initiation of any Work described in such change. This section shall not prohibit the issuance of Change Orders executed only by City, as provided in this Contract.

ARTICLE 37. FIELD ORDERS AND SUPPLEMENTAL INSTRUCTIONS

37.1. The Contract Administrator, through Consultant, shall have the right to approve and issue Field Orders setting forth written interpretations of the intent of this Contract and ordering minor changes in the Work. Field Orders may not change the Contract Price or the Contract Time.

37.2. Consultant shall have the right to approve and issue Supplemental Instructions setting forth written orders, instructions, or interpretations concerning the Contract Documents or performance of the Work. Supplemental Instructions may not change the Contract Price or the Contract Time.

ARTICLE 38. CHANGE ORDERS

38.1. Changes in the quantity or character of the Work within the scope of the Project that cannot be accomplished by means of Field Orders or Supplemental Instructions, including all changes resulting in changes to the Contract Price or the Contract Time, shall be authorized only by Change Orders approved in advance and issued in accordance with the provisions of the City of Cooper City Procurement Code, as amended from time to time.

38.2. Contractor shall not start work on any changes requiring an increase in the Contract Price or the Contract Time until a Change Order setting forth the adjustments is approved by City. Upon receipt of a Change Order, Contractor shall promptly proceed with the Work set forth in the Change Order.

38.3. If 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 of Cooper City may, at its sole option, either terminate this Contract as it applies to the items in question and make such arrangements as City of Cooper City deems necessary to complete the work associated with the disputed item or submit the matter in dispute to Consultant as set forth in Article 12.

38.4. Under circumstances determined necessary by City of Cooper City, Change Orders may be issued unilaterally by City of Cooper City. During the pendency of the dispute, and upon receipt of a Change Order from City of Cooper City, Contractor shall promptly proceed with the change in the Work involved and advise Consultant and Contract Administrator in writing within seven (7) days after receipt of the Change Order of Contractor's agreement or disagreement with the method, if any, provided in the Change Order for determining the proposed adjustment in the Contract Price or Contract Time.



38.5. On approval of any Contract change increasing the Contract Price, Contractor shall promptly ensure that the performance bond and payment bond are increased so that each reflects the total Contract Price as increased. Contractor will promptly provide City of Cooper City such updated bonds.

ARTICLE 39. VALUE OF CHANGE ORDER WORK

39.1. 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:

39.1.1. If the Work involved is covered by unit prices contained in this Contract, by application of unit prices to the quantities of items involved, subject to the provisions of Section 39.7.

39.1.2. By mutual acceptance of a lump sum, which sum Contractor and City of Cooper City acknowledge contains a component for overhead and profit.

39.1.3. On the basis of the “Cost of Work,” determined as provided in Sections 39.2 and 39.3, plus a Contractor’s fee for overhead and profit as determined in Section 39.4.

39.2. The term “Cost of Work” means the sum of all direct costs necessarily incurred and paid by Contractor (or, if applicable, Subcontractor) 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 Section 39.3.

39.2.1. 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 of Cooper 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’ 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 in advance by City.

39.2.2. 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 of Cooper City deposits funds with Contractor to make payments, in which case the cash discounts shall accrue to City of Cooper 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 by Contractor, in accordance with rental agreements approved by City of Cooper City with the advice of Consultant, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof, all in accordance with the terms of said agreements. City of Cooper City will not be responsible for the cost of the rental of any such equipment, machinery, or parts when the use thereof is no longer necessary for the Work.

39.2.3. If required by City of Cooper City, Contractor shall obtain competitive bids from Subcontractors acceptable to Contractor, and shall deliver such bids to City of Cooper City who will then determine, with the advice of Consultant, which bids will be accepted. If the subcontract provides that the Subcontractor is to be paid on the basis of Cost of Work plus a fee, the Subcontractor's Cost of Work shall be determined in the same manner as Contractor's Cost of Work. All Subcontractors shall be subject to the other provisions of this Contract insofar as applicable.

39.2.4. Cost of special consultants, 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.

39.2.5. Supplemental costs including the following:

39.2.5.1. All materials, supplies, equipment, machinery, appliances, office and temporary facilities, including transportation and maintenance thereof, at the site and hand tools not owned by the workers used in the performance of the Work, less market value of such items used but not consumed, and which items remain the property of Contractor.

39.2.5.2. Sales, use, or similar taxes related to the Work, imposed by any governmental authority, for which Contractor is liable.

39.2.5.3. The cost of utilities, fuel, and sanitary facilities at the site.

39.2.5.4. Cost of premiums for additional bonds and insurance required because of changes in the Work.

39.3. The term "Cost of Work" shall not include any of the following:

39.3.1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, schedulers, 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 that are not specifically included in the agreed-upon schedule of job classifications referred to in subsection 39.2.1, all of which payroll costs and other compensation are to be considered administrative costs covered by Contractor's fee.



39.3.2. Expenses of Contractor's principal and branch offices other than Contractor's field office at the Project site.

39.3.3. Any part of Contractor's capital expenses, including but not limited to interest on Contractor's capital employed for the Work as well as charges against Contractor for delinquent payments.

39.3.4. Cost of premiums for all bonds and for all insurance, whether Contractor is required by this Contract to purchase and maintain the same, except for additional bonds and insurance required because of changes in the Work.

39.3.5. 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 repairing or remedying any damage to property.

39.3.6. Other overhead or general expense costs of any kind.

39.4. Contractor's fee for overhead and profit shall be determined as follows:

39.4.1. A mutually acceptable fixed fee, or if no fixed fee can be agreed upon;

39.4.2. A fee based on the following percentages of the various portions of the cost of the Work:

39.4.2.1. For costs incurred under subsections 39.2.1 and 39.2.2, Contractor's fee shall not exceed ten percent (10%).

39.4.2.2. For costs incurred under subsection 39.2.3, 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%); and

39.4.2.3. No fee shall be payable on the basis of costs itemized under subsections 39.2.4 and 39.2.5 (except subsection 39.2.5.3) and Section 39.3.

39.5. The amount of credit to City of Cooper City for any change that results in a net decrease in cost will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any. Contractor shall not be entitled to claim lost profits for any Work not performed.



39.6. Whenever the cost of any Work is to be determined pursuant to Sections 39.2 and 39.3, Contractor will submit in a form acceptable to Consultant an itemized cost breakdown together with the supporting data.

39.7. If the quantity of any item of the Work covered by a unit price is increased or decreased by more than twenty percent (20%) from the quantity of such Work indicated in this Contract, an appropriate Change Order shall be issued to adjust the unit price, if warranted.

39.8. 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 Consultant and Contract Administrator.

39.8.1. Such cost estimate shall include a breakdown listing the quantities and unit prices for materials, labor, equipment and other items of cost.

39.8.2. 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.

39.9. 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.”

ARTICLE 40. NOTIFICATION AND CLAIM FOR CHANGE OF CONTRACT TIME OR CONTRACT PRICE

40.1. Any claim for a change in the Contract Time or Contract Price shall be made by written notice by Contractor to the Contract Administrator and to Consultant within five (5) days of the commencement of the event giving rise to the claim or Contractor’s knowledge of the claim, and the notice shall state the general nature and cause of the claim. Thereafter, within twenty (20) days after the termination of the event giving rise to the claim or Contractor’s knowledge of the claim, Contractor shall submit written notice of the extent of the claim with supporting information and documentation to the Contract Administrator and Consultant (hereinafter “Claim Notice”). The Claim Notice shall include Contractor’s written notarized certification that the adjustment claimed is the entire adjustment to which Contractor has reason to believe it is entitled as a result of the occurrence the event giving rise to the claim. If the Contract Administrator and Contractor cannot resolve a claim for changes in the Contract Time or Contract Price within twenty (20) days after receipt of the Claim Notice by the Contract Administrator and Consultant, then Contractor shall submit the claim to Consultant within five (5) days after the date of impasse in accordance with Article 12 hereof. **IT IS EXPRESSLY AND SPECIFICALLY AGREED THAT ANY AND ALL CLAIMS FOR CHANGES TO THE CONTRACT TIME OR CONTRACT PRICE SHALL BE WAIVED IF NOT SUBMITTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.**

40.2. The Contract Time will be extended in 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



for an extension in accordance with Section 40.1. Such delays shall include, but not be limited to, acts, omissions, or neglect by any separate contractor employed by City, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

ARTICLE 41. NO DAMAGES FOR DELAY

No claim for damages or any claim, other than for an extension of time, shall be made or asserted against City of Cooper City by reason of any delays except as provided herein. Contractor shall not be entitled to an increase in the Contract Price or payment or compensation of any kind from City of Cooper City for direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to costs of acceleration or inefficiency, arising from delay, disruption, interference or hindrance from any cause whatsoever, whether such delay, disruption, interference or hindrance be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable. Contractor shall be entitled only to extensions of the Contract Time as the sole and exclusive remedy for such resulting delay, in accordance with and to the extent specifically provided above; provided, however, that this provision shall not preclude recovery of damages by Contractor for actual delays due solely to fraud, bad faith, or active interference on the part of City of Cooper City or its Consultant.

ARTICLE 42. EXCUSABLE DELAY; COMPENSABLE; NON-COMPENSABLE

42.1. Excusable Delay. Delay that extends the completion of the Work and that is caused by circumstances beyond the control of Contractor or its Subcontractors, suppliers, or vendors are Excusable Delay. Contractor is entitled to a time extension of the Contract Time for each day the Work is delayed due to Excusable Delay. Contractor shall document its claim for any time extension as provided in Article 40 hereof. Failure of Contractor to comply with Article 40 hereof as to any particular event of delay shall be deemed conclusively to constitute a waiver, abandonment, or relinquishment of any and all claims resulting from that particular event of delay. Excusable Delay may be compensable or non-compensable, as provided below.

42.1.1. Compensable Excusable Delay. Excusable Delay is compensable when (i) the delay extends the Contract Time; (ii) is caused by circumstances beyond the control of Contractor or its Subcontractors, suppliers, or vendor; and (iii) is caused solely by fraud, bad faith or active interference on the part of City of Cooper City or its agents. In no event shall Contractor be compensated for interim delays that do not extend the Contract Time. Contractor shall be entitled to direct and indirect costs for Compensable Excusable Delay. Direct costs recoverable by Contractor shall be limited to the actual additional costs allowed pursuant to Article 39 hereof.

City of Cooper City and Contractor recognize and agree that the amount of Contractor's precise actual indirect costs for delay in the performance and completion of the Work is impossible to determine as of the date of execution of this Contract, and that proof of the precise amount will be difficult. Therefore, indirect costs recoverable by Contractor shall be liquidated on a daily basis for each day the Contract Time is delayed due to a



Compensable Excusable Delay. These liquidated indirect costs shall be paid to compensate Contractor for all indirect costs caused by a Compensable Excusable Delay, and shall include, but not be limited to, lost profits, all profit on indirect costs, home office overhead, acceleration, loss of earnings, loss of productivity, loss of bonding capacity, loss of opportunity and all other indirect costs incurred by Contractor. The amount of liquidated indirect costs recoverable shall be Three Hundred Ninety-five Dollars \$395 per day for each day this Contract is delayed due to a Compensable Excusable Delay.

42.1.2. Non-Compensable Excusable Delay. When Excusable Delay is (i) caused by circumstances beyond the control of Contractor, its Subcontractors, suppliers, and vendors; (ii) caused by circumstances beyond the control of City of Cooper City or Consultant; or (iii) caused jointly or concurrently by Contractor or its Subcontractors, suppliers or vendors and by City of Cooper City or Consultant, then Contractor shall be entitled only to a time extension and no further compensation for the delay.

ARTICLE 43. SUBSTANTIAL COMPLETION

When Contractor determines in good faith that the Work, or a portion thereof designated by City of Cooper City pursuant to Article 30 hereof, has reached Substantial Completion, including any required training, Contractor shall so notify the Contract Administrator and Consultant in writing. Consultant and the Contract Administrator shall then promptly inspect the Work. When Consultant, on the basis of such an inspection, determines that the Work or designated portion thereof is substantially complete, it will then prepare a Certificate of Substantial Completion (Form 10). The Contract Administrator shall affix its determination to the Certificate of Substantial Completion, which shall establish the Date of Substantial Completion. The Certificate of Substantial Completion shall state the responsibilities of City of Cooper City and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance. Consultant and the Contract Administrator shall develop and Contractor shall review the list of all Work yet to be completed by Contractor to satisfy the requirements of this Contract for Final Completion and to make the Work satisfactory and acceptable. The list shall be provided to Contractor within five (5) days after final development and review. If the final list is not provided within the stated five (5) days, the Contract Time for completion shall be extended by the number of days exceeding the five (5) days. The failure to include any items of corrective Work on such list does not alter the responsibility of Contractor to complete all Work in accordance with this Contract. Warranties required by this Contract shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Contract Administrator and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate of Substantial Completion.

ARTICLE 44. NO INTEREST

44.1. Unless prohibited by Applicable Law, City of Cooper City shall not be liable to pay any interest to Contractor for any reason, whether as prejudgment interest or for any other purpose,



and Contractor waives, rejects, disclaims and surrenders any and all entitlement to interest in connection with a dispute or claim arising from, related to, or in connection with this Contract.

44.2. If the preceding section is inapplicable or is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by City of Cooper City under this Contract, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under Applicable Law, one quarter of one percent (0.25%) simple interest (uncompounded).

ARTICLE 45. SHOP DRAWINGS

45.1. Contractor shall submit Shop Drawings as required by the Technical Specifications. The purpose of the Shop Drawings is to show the suitability, efficiency, technique of manufacture, installation requirements, details of the item, and evidence of its compliance or noncompliance with this Contract.

45.2. Within thirty (30) days after the Project Initiation Date specified in the Notice to Proceed, Contractor shall submit to Consultant a complete list of preliminary data on items for which Shop Drawings are to be submitted and shall identify the critical items. Approval of this list by Consultant shall in no way relieve Contractor from submitting complete Shop Drawings and providing all materials and equipment in accordance with this Contract. This procedure is required in order to expedite final approval of Shop Drawings.

45.3. After the approval of the list of items required in Section 45.2 above, Contractor shall promptly request Shop Drawings from the various manufacturers, fabricators, and suppliers.

45.4. Contractor shall thoroughly review and check the Shop Drawings, and shall approve each and every copy by initialing same, and shall transit a letter of approval to Consultant and City.

45.5. If the Shop Drawings show or indicate departures from the Contract requirements, Contractor shall specify such departures and make specific mention thereof in its letter of transmittal to Consultant and City. Failure to point out such departures shall not relieve Contractor from its responsibility to comply with this Contract.

45.6. Consultant shall review and approve Shop Drawings within twenty-one (21) days after the date received, unless said Shop Drawings are rejected by Consultant for material reasons. Consultant's approval of Shop Drawings will be general and shall not relieve Contractor of responsibility for the accuracy of such Shop Drawings, nor for the proper fitting and construction of the Work, nor for the furnishing of materials or Work required by this Contract but not indicated on the Shop Drawings. No Work called for by Shop Drawings shall be performed until the said Shop Drawings have been approved by Consultant. Approval by Consultant shall not relieve Contractor from responsibility for errors or omissions of any sort on the Shop Drawings.

45.7. No approval will be given to partial submittals of Shop Drawings for items that interconnect or are interdependent where necessary to properly evaluate the design. It is



Contractor's responsibility to assemble the Shop Drawings for all such interconnecting or interdependent items, check such items, and then make one submittal to Consultant along with Contractor's comments as to compliance, noncompliance, or features requiring special attention.

45.8. If catalog sheets or prints of manufacturers' standard drawings are submitted as Shop Drawings, any additional information or changes on such drawings shall be typewritten or lettered in ink.

45.9. Contractor shall submit the number of copies of Shop Drawings required by Consultant. Resubmissions of Shop Drawings shall be made in the same quantity until final approval is obtained.

45.10. Contractor shall keep one set of Shop Drawings marked with Consultant's approval at the job site at all times.

ARTICLE 46. FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

46.1. The entire responsibility for establishing and maintaining line and grade in the field lies with Contractor. Contractor shall maintain an accurate and precise record of the location and elevation of all pipelines, conduits, structures, maintenance access structures, handholes, fittings and the like, and shall prepare record or "as-built" drawings of the same, which must be sealed by a Professional Surveyor. Contractor shall deliver these records in good order to Consultant as the Work is completed. The cost of all such field layout and recording work is included in the bid prices for the appropriate items. All record drawings shall be made on reproducible paper and shall be delivered to Consultant prior to, and as a condition of, final payment.

46.2. Contractor shall maintain in a safe place at the Project site one record copy of all Drawings, Plans, Specifications, Addenda, written amendments, Change Orders, Field Orders and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings shall be available at all times to Consultant for reference. Upon Final Completion of the Project and prior to Final Payment, these record documents, samples, and Shop Drawings shall be delivered to the Contract Administrator.

46.3. Prior to, and as a condition precedent to Final Payment, Contractor shall submit to City of Cooper City Contractor's record drawings or as-built drawings acceptable to Consultant.

ARTICLE 47. SAFETY AND PROTECTION

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

47.1.1. All employees on the work site and other persons who may be affected thereby;



47.1.2. All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the Project site; and

47.1.3. Other property at the Project site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

47.2. Contractor shall comply with all Applicable Law of any public body having jurisdiction for the safety of persons or property or to protect person or property from damage, injury, or loss, and Contractor shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and utilities when performance of the Work may affect them. All damage, injury, or loss to any property referred to in subsections 47.1.2 and 47.1.3 above, caused directly or indirectly, in whole or in part, by Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be repaired or remedied by Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Consultant has issued a notice to City of Cooper City and Contractor that the Work is acceptable except as otherwise provided in Article 30.

47.3. Contractor shall designate a responsible member of its organization at the Project site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to City.

ARTICLE 48. FINAL BILL OF MATERIALS

Contractor shall be required to submit to City of Cooper City and Consultant a final bill of materials with unit costs for each bid item for supply of materials installed. This shall be an itemized list of all materials with a unit cost for each material, and the total cost shall be determined on the basis of the unit costs established for each Contract item. A Final Certificate for Payment will not be issued by Consultant until Contractor submits the final bill of materials and Consultant verifies the accuracy of the units of Work.

ARTICLE 49. PROJECT SIGN

Any requirements for a project sign shall be as set forth within the Technical Specifications section.

ARTICLE 50. CLEANING UP; CITY'S RIGHT TO CLEAN UP

Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by its operations. At the completion of the Project, Contractor shall remove all its waste materials and rubbish from and about the Project as well as its tools, construction equipment, machinery and surplus materials. If Contractor fails to clean up during the performance of the Work or at the completion of the Work, City of Cooper City may do so and the cost thereof shall be charged to Contractor. If a dispute arises between Contractor and



separate contractors of City of Cooper City as to their responsibility for cleaning up, City of Cooper City may clean up and charge the cost thereof to the contractors responsible as Consultant shall determine to be appropriate and equitable.

ARTICLE 51. HURRICANE PRECAUTIONS

51.1. During such periods of time as are designated by the National Weather Services as being a hurricane watch or warning, Contractor, at no cost to City, shall take all precautions necessary to secure the Project site from any damage that may be caused by all threatened storm events, regardless of whether City of Cooper City or Consultant has given notice of same.

51.2. Compliance with any specific hurricane watch or warning precautions will not constitute additional work.

51.3. Suspension of the Work caused by a threatened or actual storm event, regardless of whether City of Cooper City has directed such suspension, will entitle Contractor to additional Contract Time as noncompensable, excusable delay, and shall not give rise to a claim for compensable delay.

ARTICLE 52. REMOVAL OF EQUIPMENT

In case of termination of this Contract before completion for any cause whatsoever, Contractor, if notified to do so by City of Cooper City, shall promptly remove any part or all of Contractor's equipment and supplies from the property of City of Cooper City, failing which City of Cooper City shall have the right to remove such equipment and supplies at the expense of Contractor.

ARTICLE 53. DOMESTIC PARTNERSHIP REQUIREMENT

[THIS ARTICLE IS NOT APPLICABLE TO THIS PROJECT]

Unless this Contract is exempt from the provisions of the Broward County Domestic Partnership Act, Section 16½-157, of the Code ("Act"), Contractor certifies and represents that it will at all times comply with the provisions of the Act, and the contract language referenced in the Act is deemed incorporated in this Contract as though fully set forth in this section. The failure of Contractor to comply shall be a material breach of this Contract, entitling City of Cooper City to pursue any and all remedies provided under Applicable Law including, but not limited to (1) retaining all monies due or to become due Contractor until Contractor complies; (2) termination of this Contract; and (3) suspension or debarment of Contractor.

ARTICLE 54. EQUAL EMPLOYMENT OPPORTUNITY AND COUNTY BUSINESS ENTERPRISE / SMALL BUSINESS ENTERPRISE COMPLIANCE

[THIS ARTICLE IS NOT APPLICABLE TO THIS PROJECT]



54.1. No party to this Contract may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this Contract, except that any project assisted by the U.S. Department of Transportation funds shall comply with the nondiscrimination requirements in 49 C.F.R. Parts 23 and 26. Contractor shall include the foregoing or similar language in its contracts with any Subcontractors.

54.2. By January 1 of each year, Contractor must submit, and cause each of its Subcontractors to submit, an Ownership Disclosure Form (or such other form or information designated by City), available at <https://www.broward.org/econdev/Pages/forms.aspx>, identifying the ownership of the entity and indicating whether the entity is majority-owned by persons fitting specified classifications.

54.3. Contractor shall comply with all applicable requirements in Section 1-81 of the Code, in the award and administration of this Contract. Failure by Contractor to carry out any of the requirements of this article shall constitute a material breach of this Contract, which shall permit City of Cooper City to terminate this Contract or exercise any other remedy provided under this Contract or Applicable Law, all such remedies being cumulative.

54.4. Contractor must meet or exceed the required CBE or SBE goal by utilizing the CBE or SBE firms listed in Exhibit __ (or a CBE/SBE firm substituted for a listed firm, if permitted) for ___ percent (__%) of total Work under this Contract (the "Commitment"). In performing the Work, Contractor shall utilize the CBE or SBE firms listed in Exhibit __ for the scope of work and the percentage of work amounts identified on each Letter of Intent. Promptly upon execution of this Contract by City, Contractor shall enter into formal contracts with the CBE or SBE firms listed in Exhibit __ and, upon request, shall provide copies of the contracts to the Contract Administrator and OESBD.

[USE FOLLOWING INSTEAD IF A CBE RESERVE PROJECT]

City of Cooper City has reserved this procurement solely for performance by CBE firms; therefore the CBE goal is one hundred percent (100%) of the Work under this Contract (the "Commitment"). Contractor is a CBE firm and agrees that it will meet the Commitment by Contractor performing the Work without subcontracting, or by Contractor performing at least fifty percent (50%) of the Work and subcontracting the remainder to CBE firms listed in Exhibit __ (or CBE firms substituted or approved by OESBD during the term of this Contract).

[USE FOLLOWING INSTEAD IF A SBE RESERVE PROJECT AND MODIFY REMAINDER OF ARTICLE 54 ACCORDINGLY]

City of Cooper City has reserved this procurement solely for performance by an SBE firm; therefore the SBE goal is one hundred percent (100%) of the Work under this Contract (the "Commitment"). Contractor is an SBE firm and agrees that it will meet the Commitment by Contractor performing the Work without subcontracting, or by Contractor performing at least fifty percent (50%) of the Work and subcontracting the remainder to SBE firms listed in Exhibit __ (or SBE firms substituted or approved by OESBD during the term of this Contract).



54.5. Each CBE or SBE firm utilized by Contractor to meet the CBE or SBE goal must be certified by OESBD. Contractor shall inform City of Cooper City immediately when a CBE or SBE firm is not able to perform or if Contractor believes the CBE or SBE firm should be replaced for any other reason, so that OESBD can review and verify the good faith efforts of Contractor to substitute the CBE or SBE firm with another CBE or SBE firm. Whenever a CBE or SBE firm is terminated for any reason, Contractor shall provide written notice to OESBD and, upon written approval of the Director of OESBD, shall substitute another CBE or SBE firm in order to meet the CBE or SBE goal, unless otherwise provided in this Contract or agreed to in writing by the Parties. Such substitution shall not be required if the termination results from modification of the scope of services and no CBE or SBE firm is available to perform the modified scope of services; in which event, Contractor shall notify City, and OESBD may adjust the CBE or SBE goal by written notice to Contractor. Contractor shall not terminate a CBE or SBE firm for convenience without City's prior written consent, which consent shall not be unreasonably withheld.

54.6. The Parties stipulate that if Contractor fails to meet the Commitment, the damages to City of Cooper City arising from such failure are not readily ascertainable at the time of contracting. If Contractor fails to meet the Commitment and City of Cooper City determines, in the sole discretion of the OESBD Program Director, that Contractor failed to make Good Faith Efforts (as defined in Section 1-81 of the Code) to meet the Commitment, Contractor shall pay City of Cooper City liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Contractor failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount excluding costs and reimbursable expenses. An example of this calculation is stated in Section 1-81.7 of the Code. As elected by City, such liquidated damages amount shall be either credited against any amounts due from City, or must be paid to City of Cooper City within thirty (30) days after written demand. These liquidated damages shall be City's sole contractual remedy for Contractor's breach of the Commitment, but shall not affect the availability of administrative remedies under Section 1-81. Contractor acknowledges and agrees that the liquidated damages provided in this section are proportionate to an amount that might reasonably be expected to flow from a breach of the Commitment and are not a penalty. Any failure to meet the Commitment attributable solely to force majeure, changes to the Scope of Work by City, or inability to substitute a CBE or SBE Subcontractor where the OESBD Program Director has determined that such inability is due to no fault of Contractor, shall not be deemed a failure by Contractor to meet the Commitment.

54.7. Contractor acknowledges that the Board, acting through OESBD, may make minor administrative modifications to Section 1-81 of the Code, which shall become applicable to this Contract if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to Contractor and shall include a deadline for Contractor to notify City of Cooper City in writing if Contractor concludes that the modification exceeds the authority under this section. Failure of Contractor to timely notify City of Cooper City of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by Contractor.



54.8. City of Cooper City may modify the Commitment in connection with any amendment, extension, modification, or change order to this Contract that, by itself or aggregated with previous amendments, extensions, modifications, or change orders, increases the initial Contract price by ten percent (10%) or more. Contractor shall make a good faith effort to include CBE or SBE firms in work resulting from any such amendment, extension, modification, or change order, and shall report such efforts, along with evidence thereof, to OESBD.

54.9. Contractor shall provide written monthly reports to the Contract Administrator attesting to Contractor's compliance with the Commitment. In addition, Contractor shall allow City of Cooper City to engage in onsite reviews to monitor Contractor's progress in achieving and maintaining the Commitment. The Contract Administrator in conjunction with OESBD shall perform such review and monitoring, unless otherwise determined by the City of Cooper City Administrator.

54.10. The Contract Administrator may withhold progress payments if Contractor fails to demonstrate timely payments of sums due to all Subcontractors and suppliers. The presence of a "pay when paid" provision in a Contractor's contract with a CBE or SBE firm shall not preclude City of Cooper City or its representatives from inquiring into claims of nonpayment.

ARTICLE 55. PUBLIC RECORDS

Notwithstanding anything else in this Contract, any action taken by City of Cooper City in compliance with, or in a good faith attempt to comply with, the requirements of Chapter 119, Florida Statutes, shall not constitute a breach of this Contract. If Contractor is acting on behalf of City of Cooper City as provided in Section 119.0701, Florida Statutes, Contractor shall:

55.1. Keep and maintain public records required by City of Cooper City to perform the services under this Contract;

55.2. Upon request from City, provide City of Cooper City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by Applicable Law;

55.3. Ensure that public records that are exempt or confidential and exempt from public record requirements are not disclosed except as authorized by Applicable Law for the duration of this Contract and after completion or termination of this Contract if the records are not transferred to City; and

55.4. Upon completion or termination of this Contract, transfer to City, at no cost, all public records in possession of Contractor or keep and maintain public records required by City of Cooper City to perform the services. If Contractor transfers the records to City, Contractor shall destroy any duplicate public records that are exempt or confidential and exempt. If Contractor keeps and maintains public records, Contractor shall meet all requirements of Applicable Law for retaining public records. All records stored



electronically must be provided to City of Cooper City upon request in a format that is compatible with the information technology systems of City.

The failure of Contractor to comply with the provisions of this article shall constitute a material breach of this Contract entitling City of Cooper City to exercise any remedy provided in this Contract or under Applicable Law, all of such remedies being cumulative.

If Contractor receives a request for public records regarding this Contract or the Services, Contractor must immediately notify the Contract Administrator in writing and provide all requested records to City of Cooper City to enable City of Cooper City to timely respond to the public records request. City of Cooper City will respond to all such public records requests.

Contractor must separately submit and conspicuously label as “RESTRICTED MATERIAL – DO NOT PRODUCE” any material (a) that Contractor contends constitutes or contains its trade secrets under Chapter 688, Florida Statutes, or (b) for which Contractor asserts a right to withhold from public disclosure as confidential or otherwise exempt from production under Florida public records laws (including Chapter 119, Florida Statutes) (collectively, “Restricted Material”). In addition, Contractor must, simultaneous with the submission of any Restricted Material, provide a sworn affidavit from a person with personal knowledge attesting that the Restricted Material constitutes trade secrets or is otherwise exempt or confidential under Florida public records laws, including citing the applicable Florida statute and specifying the factual basis for each such claim. Upon request by City, Contractor must promptly identify the specific applicable statutory section that protects any particular document. If a third party submits a request to City of Cooper City for records designated by Contractor as Restricted Material, City of Cooper City shall refrain from disclosing such material unless otherwise ordered by a court of competent jurisdiction, authorized in writing by Contractor, or the claimed exemption is waived. Any failure by Contractor to strictly comply with the requirements of this section shall constitute Contractor’s waiver of City’s obligation to treat the records as Restricted Material. Contractor must indemnify and hold harmless City of Cooper City and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys’ fees, litigation expenses, and court costs, relating to nondisclosure of Restricted Material in response to a third-party request.

IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF FLORIDA STATUTES CHAPTER 119 TO CONTRACTOR’S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 954-433-4300, TAllen@CooperCity.gov, 9090 SW 50th Place, Cooper City, FL 33328

(The remainder of this page is intentionally left blank.)

[END OF SECTION]



SECTION IV – SUPPLEMENTAL GENERAL CONDITIONS

[THIS IS ARPA RELATED SECTION AND IS NOT APPLICABLE TO THIS PROJECT]

The following deviations are incorporated herein and made a part of this Contract, revising the respective article and section as noted below.

Coding: Words in ~~striketrough~~ type are deletions from existing text. Words in underlined text are additions to existing text.

This project is funded through the American Rescue Plan Act (ARPA) of 2021. Consequently, the awarded vendor shall comply with requirements of ARPA agreement number Y5181 entered into by and between the State of Florida, Division of Emergency Management and the City of Cooper City. By entering into this Contract, the ARPA awardee agrees, at a minimum, to review and comply with the applicable requirements of 2 CFR Part 200 Subpart D. In case of any conflict between the City's Contract terms and conditions and ARPA provisions (presented as Supplemental General Conditions), the ARPA provisions shall prevail.

SGC-1 LAWS, RULES, REGULATIONS, AND POLICIES

Performance under this Agreement is subject to the applicable provisions of 2 CFR Part 200, Entitled "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards" including the cost principles and restrictions on general provisions for selected items of cost.

i. The following 2 CFR policy requirements also apply to this assistance listing:

- 2 CFR Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- 2 CFR Part 25 – Universal Identifier and System for Award Management
- 2 CFR Part 170 – Reporting Subaward and Executive Compensation Information
- 2 CFR Part 180 – OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)

ii. The following 2 CFR Policy requirements are excluded from coverage under this assistance listing:

- 2 CFR § 200.204 – Notices of Funding Opportunities
- 2 CFR § 200.205 – Federal awarding agency review of merit proposals
- 2 CFR § 200.210 – Preward costs



- 2 CFR § 200.213 – Reporting a determination that a non-Federal entity is not qualified for Federal award
- 2 CFR § 200.308 – Revision of budget and program plans
- 2 CFR § 200.309 – Modifications to Period of Performance
- 2 CFR § 200.305 (b) (8) – The non-Federal entity must maintain advance payments of Federal awards in interest-bearing accounts
- 2 CFR § 200.305 (b) (9) – Interest earned amounts up to \$500 per year

SGC-2 FEDERALLY FUNDED EQUAL OPPORTUNITY CLAUSE

- (1) Equal Employment Opportunity: During the performance of this contract, CONTRACTOR agrees to comply with 41 CFR 60-1.4(b), including, but not limited to, the following:
 - a. CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - b. CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
 - c. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- (2) CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with CONTRACTOR's legal duty to furnish



information.

- (4) CONTRACTOR will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of CONTRACTOR's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of CONTRACTOR's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and CONTRACTOR may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) CONTRACTOR will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

SGC-3 COPELAND "ANTI-KICKBACK" ACT

CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act, (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States") as may be applicable, which are incorporated by reference into this §



874; 40 U.S.C. § 3145; and 29 CFR part 3. CONTRACTOR must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which they are otherwise entitled. CITY must report all suspected or reported violations to the Federal awarding agency.

SGC-4 CONTRACT WORK HOURS AND SAFETY STANDARDS

Contract Work Hours and Safety Standards Act. (40 U.S.C. 3701- 3708). Where applicable, pursuant to 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5) CONTRACTOR must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation.

SGC-5 CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

Clean Air Act: Pursuant to 42 U.S.C. 7401- 7671q. and the Federal Water Pollution Control Act (33 U.S.C. 1251- 1387), as amended CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401- 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251- 1387). CITY will report violations to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

1. Clean Air Act:) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- (2) The contractor agrees to report each violation to CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the State, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.
2. Federal Water Pollution Control Act:) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.



- (2) The contractor agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the State, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.”

SGC-6 SUSPENSION AND DEBARMENT

- (4) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by CITY. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to State and CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

SGC-7 BYRD ANTI-LOBBYING AMENDMENT CLAUSE

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended). Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.



[END OF SECTION]



SECTION V – SUPPLEMENTAL WAGE REQUIREMENTS

1. Prevailing Wage Rate Ordinance - This Project is not federally funded. If the price of this Contract is in excess of Two Hundred Fifty Thousand Dollars (\$250,000.00), the following sections shall apply.

1.1. Contractor shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor Regulations (29 CFR Part 5).

1.2. The rate of wages and fringe benefit payments for all laborers, mechanics, and apprentices shall not be less than those payments for similar skills in classifications of work in a like construction industry as determined by the Secretary of Labor and as the most recently published in the Federal Register.

1.3. All mechanics, laborers, and apprentices, employed or working on the site of the Work, shall be paid in accordance with the above referenced wage rates. Contractor shall post this section of the Contract (Supplemental Wage Requirements) at the site of the Work in a prominent place where it can be easily seen by the workers.

1.4. If the Parties cannot agree on the proper classification of a particular class of laborers or mechanics or apprentices that will be used on the Work site, the Contract Administrator shall submit the question, together with its recommendation, to the City of Cooper City Administrator for final determination, which shall be binding.

1.5. If the Contract Administrator determines that any laborer or mechanic or apprentice employed by Contractor or any Subcontractor on the site of the Work has been or is being paid wages less than the rate of wages required by the Davis-Bacon Act, as amended, the Contract Administrator may (1) by written notice to Contractor direct Contractor to terminate the Work or such part of Work for which there has been a failure to pay said required wages; and (2) contract with another party perform the Work or portion thereof to completion. Whereupon, Contractor and its Sureties shall be liable to City of Cooper City for any all costs incurred by City of Cooper City to complete such Work to the extent such costs exceed any amounts that Contractor would be due for performance of such Work.

1.6. Contractor shall maintain payrolls and basic records relating thereto during the course of the Work and shall preserve such for a period of three (3) years thereafter for all laborers, mechanics, and apprentices working at the site of the Work. Such records shall contain the name and address of each such employee; the employee’s current classification; rate of pay (including rates of contributions for, or costs assumed to provide, fringe benefits); daily and weekly number of hours worked; deductions made; and actual wages paid.

1.7. Contractor shall submit, with each application for payment, a signed and sworn “Statement of Compliance” (007500-8) attesting to compliance with the Prevailing Wage Ordinance, Section 26-5 of the Broward County of Ordinances, as amended.



1.8. The Contract Administrator may withhold or cause to be withheld from Contractor so much of the payments requisitioned as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and guards employed by Contractor or any Subcontractor on the Work, the full amount of wages required by this Contract.

1.9. If Contractor or any Subcontractor fails to pay any laborer, mechanic, or apprentice employed or working on the site of the Work all or part of the wages required by this Contract, the Contract Administrator may, after written notice to Contractor, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

2. Federal Grant Projects:

2.1. Because this Project will be funded, in whole or in part, by the United States government all Federal assurances applicable to such funding, including any and all supervening assurances set forth in Rules and Regulations published in Federal Register or C.F.R., shall apply to this Contract.

2.2. Accordingly, all clauses, terms, or conditions required by federal grantor agency with respect to the federal funding for this Project are hereby attached and made a part of this Contract. **[ATTACH RELEVANT DOCUMENTS IF SECTION 2 BOX IS CHECKED]**

[END OF SECTION]



SECTION VI – SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1 SCOPE OF WORK

The City of Cooper City Utilities Department is proposing to replace the existing Pump Station #55 Generator. The City's sewage Pump Station #55 has been in service since the last 1980's operating with most of the original equipment still in service. The project will consist of the existing pump station generator including electrical, power, control, and lighting replacement. Proposed improvements consist of replacing the new generator outside of the existing generator room and will include a sound-attenuating, weatherproof enclosure, and sub-base fuel tank. Additionally, a concrete generator pad is included in the scope of work. The project also includes the installation of a permanent 12-inch bypass force main. Force main work includes all necessary valves, fittings, and connections. The objective of this ITB is to secure the services of a qualified, experienced, and reliable contractor that will promptly and efficiently provide the City with the materials, equipment, and services necessary to execute the work at the lowest price, in compliance with industry standards, federal, state and local requirements and the terms, conditions and specifications of this solicitation.

No compensation will accrue, be owed or paid to the awarded bidder unless the contract has been fully executed, Notice to Proceed provided, a purchase order has been issued with accompanying Task Order or Work Authorization and the work of the contract has been completed as accepted and approved by the City.

REFER TO THE ATTACHED, ADDITIONAL TECHNICAL SPECIFICATIONS AND PROJECT DRAWINGS

[END OF SECTION]



SECTION VII BID PROPOSAL

ATTACHMENT A BID FORM
(Page 1 of 7)

City of Cooper City, Florida

Bid Form

(7 pages)

**Pump Station #55 Generator
Replacement**

ITB 2023-06-UTL

Bids Due: Monday, November 27, 2023

For information, contact the Purchasing Division:

The Purchasing Division
954-433-4300 Ext. 268
Purchasing@CooperCity.gov

Release Date: Friday, October 27, 2023

Submitted by: _____
(Company name)

**PLEASE RETURN ONLY THIS BID FORM (7 PAGES) AND THE REQUIRED
ATTACHMENTS.**



ATTACHMENT A
(Page 2 of 7)

Project: PUMP STATION #55 GENERATOR REPLACEMENT

Contract Identification: ITB 2023-06-UTL

Bids submitted to: Office of the City Clerk
City of Cooper City
9090 SW 50th Place
Cooper City, Florida, 33328

1. The undersigned submitter/proposes and agrees, if this Bid is accepted, to enter into an agreement with City in the form included in the contract documents to perform and furnish all work as specified or indicated in the contract documents for the contract price and within the contract time indicated in this bid and in accordance with the other terms and conditions of the contract documents.
2. Bidder accepts all of the terms and conditions of the advertisement of Invitation to Bid and Instruction to Bidders including, without limitation, those dealing with the Bid requirements. This Bid will remain in full force for 120 days from bid opening date. Bidder will sign and submit an agreement with the Bonds and other documents required by the Bidding Requirements within fifteen (15) days after the City's Notice of Award.
3. If awarded the Contract, Bidder agrees to fully complete all necessary work within the time limits specified below after date of written Notice to Proceed, with such extensions of time as are provided for in the General Conditions

Substantial Completion: 370 calendar days from Notice to Proceed
Final Completion: 400 calendar days from Notice to Proceed

4. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement that:
 - a. Bidder has examined copies of all plans, and bidding documents, contract specifications and instruction to bidders.
 - b. Bidder has familiarized itself with the nature and extent of the Contract Documents, work site, locality, local conditions and the laws and regulations that in any manner may affect the cost, progress, performance or furnishing of the work.
 - c. Bidder has studied carefully all reports and drawings of the project and the physical conditions of the project site areas and accepts the extent of the technical data contained in such reports and drawings upon which Bidder is entitled to rely.



ATTACHMENT A
(Page 3 of 7)

- d. Bidder has correlated the results of their studies and reviews, observations, investigations, explorations, tests, and studies with the terms and conditions of the contract documents.
- e. Bidder has given City written notice of all conflicts, errors or discrepancies that is has discovered in these documents and the written resolution thereof by City is acceptable to Bidder.
- f. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporate and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false Bid, and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or the City.

5. Bid Copies:

ONE (1) ORIGINAL, TWO (2) COPIES and ONE (1) ELECTRONIC COPY (Flash Drive) of the Bid should be submitted to the City of Cooper City, City Hall, 9090 SW 50th Place, Cooper City, Florida 33328, to the attention of the Office of the City Clerk. If by US mail, Bids shall be submitted to 9090 SW 50th Place, Cooper City, Florida 33328.

6. Addenda, Additional Information-Contact with City Staff

Bidder acknowledges receipt of _____ (insert number) Addenda for this project

Any addenda or answers to written questions supplied by the City to participating Bidders become part of this Invitation to Bid and the resulting contract. The Bid Form shall be signed by an authorized company representative dated and returned with the proposal Bid.

No negotiations, decisions or actions shall be initiated or executed by the Bidder as result of any discussions with any City employee. Only those communications which are in writing from the City may be considered as a duly authorized expression. Also, only communications from bidder that are signed and in writing will be recognized by the City as duly authorized expressions on behalf of the bidder.

Specific questions related to the Scope of Services requested shall be directed in writing to the City of Cooper City Purchasing Division. Questions must be emailed to Purchasing@CooperCity.gov., who may respond in kind with copies to all Bidders. **The deadline for submission of questions is 5:00 PM, Monday, November 20, 2023.**



ATTACHMENT A
(Page 4 of 7)

The successful bidder shall be required to execute a City contract covering the scope of services to be provided and setting forth the duties, rights and responsibilities of the parties.

This contract must be executed by the successful bidder prior to recommendation of award and presentation to the City Commission.

7. Summary of Documents to be submitted with Bid

| Mark Complete | Attachment Letter | Attachment Name |
|----------------------|--------------------------|--|
| | A | Bid Form |
| | B | List of Subcontractors/Suppliers |
| | C | Reference Form |
| | D | Public Entity Crimes (PEC) Form |
| | E | ADA Affidavit |
| | F | Business Entity Affidavit |
| | G | Bidder's Foreign (Non-Florida) Corporate Statement (If applicable) |
| | H | W-9, Request for Taxpayer Identification Number |
| | I | Proof of Workers Compensation Insurance or Exemption |
| | J | Proof of Liability Insurance |
| | K | Ownership Disclosure Affidavit |
| | L | Drug-Free Workplace Certificate |
| | M | Employee Background Verification Affidavit |
| | N | Scrutinized Companies Affidavit |
| | O | Non-Conflict of Interest Statement |
| | P | E-Verify Form |
| | Q | Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion |
| | R | Bid Bond (5%) |

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ATTACHMENT A
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Bidder's Contact Information

Name of Company: _____

Address: _____

Type of Business _____

Company's Website: _____

Authorized Signatory Contact: _____

Title: _____

Tel: _____ Mobile: _____

Email Address (Required): _____

Primary Contact: _____

Title: _____

Tel: _____ Mobile: _____

Email Address (Required): _____

Additional Contact & Title: _____

Tel: _____ Mobile: _____

Email Address (Required): _____



ATTACHMENT A
(Page 6 of 7)

Remit to Address: _____

Remit to Contact: Name: _____ Tel: _____

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ATTACHMENT A

(Page 7 of 7)

**PUMP STATION #55 GENERATOR REPLACEMENT
 PRICING SHEET**

| <u>ITEM #</u> | <u>TITLE</u> | <u>DESCRIPTION</u> | <u>QUANTITY</u> | <u>UNIT</u> | <u>UNIT PRICE</u> | <u>AMOUNT</u> |
|---------------|--|--|-----------------|-------------|-------------------|---------------|
| 1 | REMOVE AND DISPOSE OF EXISTING ELECTRICAL SYSTEM | Measurement and payment for removing and disposing of existing electrical system will be based upon a lump sum price of the full removal of all existing components of the existing generator system as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment for removing and disposing of existing electrical system will be made at the lump some price and detailed on the drawings which price shall constitute full removal of all components of the existing generator, fuel tank, electrical panel, generator breaker panel, existing generator day tank, fuel tank piping, mounting hardware, wires, and conduit. Contractor is responsible of obtaining all necessary permits including any environmental fees and work to remove existing fuel systems. | 1 | EA | | |
| 2 | REMOVE AND DISPOSE OF EXISTING CONCRETE SIDEWALK | Measurement for payment to remove and dispose of existing concrete sidewalk will be based upon the actual number of square yards of such concrete sidewalk actually removed, all in accordance with the Contract Documents. Payment for removal and disposal of existing concrete sidewalk will be made at the unit price per square yard of concrete sidewalk named in the Item Response Form which price shall constitute full compensation for saw cutting (as necessary), the removal and disposal of such concrete sidewalk. Thickness of existing concrete sidewalk may vary, removal will be paid at the square yard cost, no additional compensation will be made for thickness. | 10 | SY | | |



City of Cooper City, Florida
 ITB 2023-06-UTL, Pump Station #55 Generator Replacement

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| 3 | REMOVE EXISTING FUEL CONTAINMENT STRUCTURE | Measurement for payment to remove the existing concrete fuel containment structure will be based upon a lump sum unit price for the removal of the entire existing concrete fuel containment structure, all in accordance with the Contract Documents. Payment to remove the existing concrete fuel containment structure will be made at the unit lump sum price named in the Item Response form which price shall constitute full compensation for the removal of the existing concrete walls and base pad of the structure. Concrete shall be removed in complete and will include but is not limited to the removal of all foundation, footers, cutting of wall, rebar removal, and rebar grinding. Inclusive of temporary wall or barrier to be installed following wall removal to ensure environmental security in walled area prior to removal of existing fuel tank. This item also includes removal and disposal of the existing fuel tank and fuel lines that connect the generator to the fuel tank | 1 | EA | | |
| 4 | CONCRETE SIDEWALK RESTORATION | Measurement and payment for concrete sidewalk restoration will be based upon the actual number of square yards of such sidewalks constructed as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment for concrete sidewalk restoration will be made at the unit price per square yard and detailed on the drawings which price shall constitute full compensation for completing said work, including removing and disposing of existing concrete sidewalk, all earthwork, compaction of subgrade, backfilling of sidewalk, construction of the 4 - 6 inch thick concrete sidewalk, furnishing and setting for expansion joint material, furnishing and installing 1 inch PVC sleeve for existing irrigation connections as directed by ENGINEER, disposal of excess material, restoration/replacement of sod disturbed to equal condition as existing, and the appurtenant items for which separate payment is not specifically included in the Item Response Form. | 10 | SY | | |



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| 5 | FURNISH AND INSTALL 24-INCH CONCRETE GENERATOR PAD | Measurement and payment for furnishing and installing a 24-inch concrete generator pad will be based upon a lump sum price for the installation of the concrete pad as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment for furnishing and installing a 24-inch concrete generator pad will be based upon a lump sum price for the installation of the concrete pad and detailed on the drawings which price shall constitute full compensation for completing said work, including all fill required to meet detail requirements, earthwork, compaction of subgrade, backfilling, construction of the 24- inch thick concrete pad, construction of footings, installation of connection points to the proposed generator, furnishing and setting for expansion joint material, furnishing and installing all necessary reinforcement, any Dowling and connecting to existing concrete slab, disposal of excess material, restoration/replacement of sod disturbed to equal condition as existing, and the appurtenant items for which separate payment is not specifically included in the Item Response Form. | 1 | EA | | |
| 6 | FURNISH AND INSTALL SOD | Measurement for payment for furnishing and installing sod will be based upon the number of square yards of sod actually installed, all in accordance with the requirements of the Contract Documents. Payment for sod will be made at the unit price per square yard of sod and shall constitute full compensation for furnishing and installing the sod matching existing type and maintaining sod for 30 days. No additional compensations will be made for the type of sod installed or watering and maintaining sod for 30 days after installation. | 50 | SY | | |
| 7 | EXISTING IRRIGATION SYSTEM RESTORATION | Measurement for payment for irrigation system restoration will be based upon a lump sum price for the restoration of the existing irrigation system. As such, the actual quantity may not equal the estimated quantity and no additional compensation will be granted. Irrigation systems shall be restored with coverage matching that prior to construction, pipe and sprinklers matching the size and type of the existing pipe and sprinkler heads, and necessary adapters, | 1 | LS | | |



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| | | coupling at each end splicing the restored pipe in place and connecting to existing sleeves underneath the sidewalk. If irrigation system is to be partially abandoned, then that which is being abandoned shall be removed, and the remaining exposed pipes shall be capped and protected. All work shall meet the approval of the ENGINEER. | | | | |
| 8 | FURINSH AND INSTALL P401 DIP FORCE MAIN | Measurement for payment for furnishing and installing force main pipe will be based upon the number of linear feet of such pipe actually constructed as determined by measurement along the centerline of the pipe in place at 36 inches minimum cover or more to avoid other underground utilities. Payment for furnishing and installing force main pipe will be made at the unit price per linear foot of pipe complete and in place including all clearing and grubbing, remove and stockpile limerock, pipe, connections to existing pipe, unloading, sheeting, excavation, trench protection and trench safety, dewatering, laying, backfilling, compaction, pressure testing, flushing and temporary blow off with full cannon. As-builts for newly installed force mains must be provided before compensation for said force main will be approved. | 35 | LF | | |
| 9 | FURNISH AND INSTALL 12" PLUG VALVE | Measurement for payment to furnish and install plug valves will be based upon actual quantity, each, of such plug valves furnished and installed, all in accordance with the requirements of the Contract Documents. Test valves will not be compensated for under this line item. Payment for furnishing and installing plug valves will be made at the unit price, each, which price shall constitute full compensation for the completed installation of the valve, including valve, valve box and extension to surface, 2 inch brass ID disk with all restrain glands. No additional compensation will be granted for installation of side mounted valves as directed by the Engineer. | 2 | EA | | |



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| 10 | FURNISH AND INSTALL 12" CHECK VALVE | Measurement for payment to furnish and install check valves will be based upon actual quantity, each, of such check valves furnished and installed, all in accordance with the requirements of the Contract Documents. Payment for furnishing and installing check valves will be made at the unit price, each, of check valve, excavation, dewatering, any form and amount of shoring, backfill and compaction, rock bedding for structure, epoxy coating, testing, and construction of the reinforced concrete structure with ring and cover. | 1 | EA | | |
| 11 | FURNISH AND INSTALL FORCE MAIN FITTINGS | Measurement for payment to furnish and install force main fittings, unless specifically listed separately, shall be at the unit bid price per ton for such fittings, including but not limited to crosses, tees, bends and elbows of all angles and radius, concentric and eccentric reducers, offsets, wyes, true wyes, sleeves, plugs, caps, restraining glands and gaskets, base bends, base tees, reducing flanges, mega lugs, fillers and connecting pieces, furnished all in accordance with the Contract Documents. Payment for furnishing and installing force main fittings complete and in place shall be at the unit bid price per ton and shall include furnishing, storing, transporting and installing the fittings. | 0.5 | TONS | | |
| 12 | CONNECT TO EXISTING FORCE MAIN | Measurement and payment for performing all connections to existing force mains will be based on the actual quantity, each, of such connection made all in accordance with the Contract Documents. Payment for connecting to existing force main shall be made at the unit price, each, which shall constitute full compensation for all materials (regardless of size) and labor needed to complete connection which shall include but is not limited to valves, fittings, spool pieces, corporation stops, saw cutting, removal and disposal of existing piping and fittings to prepare for connection and filling and flushing of main. All coordination needed for force main shut offs shall be responsibility of the CONTRACTOR and is included in the scope of this item. | 1 | EA | | |



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| 13 | FURNISH AND INSTALL 12 INCH X 12 INCH TAPPING SLEEVE AND VALVE | Measurement for payment to furnish and install tapping sleeve and valve will be based upon the actual quantity, each, of such connections made all in accordance with the contract documents. Payment for furnishing and installing tapping sleeve and valve shall be made at the unit price, each, which shall constitute full compensation for all materials (regardless of force main size) and labor needed to complete connection which shall include but is not limited to valves, fittings, spool pieces, corporation stops, removal and disposal of existing piping and fittings to prepare for connection and filling and flushing of main. | 1 | EA | | |
| 14 | FURNISH AND ISNTALL 400KW GENERATOR IN OUTDOOR ENCLSURE & 2,500 GALLON FUEL TANK | Measurement for payment for furnish and installing 400 KW generator in outdoor enclosure and fuel tank will be based upon a lump sum price all in accordance with the Contract Documents. Payment for furnishing and installing 400 KW generator in outdoor enclosure will be based upon a lump sum price for furnishing and install as detailed on the drawings which price shall constitute full compensation for completing said work, including all connecting generator to concrete pad, material and labor to install electrical system, necessary permits, inspections, grounding, record drawings. Fuel tank shall be 2,500 gallons. All work to connect fuel tank to generator shall be included in this line item. | 1 | LS | | |
| 15 | FURNISH AND INSTALL CONDUIT & WIRE | Measurement and payment for furnishing and installing conduit & wire will be based upon a lump sum price for the installation of all wire and conduit for the new generator and connection to existing systems as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment for furnishing and installing conduit & wire will be made at the lump sum for all work detailed on the drawings which price shall constitute full compensation for completing said work, including excavation, concrete coring, concrete wall patching, obtaining all permits and inspections, conduits, pull-boxes, grounding, testing, cables, backfilling, compaction, conduit duct seal, and other material and | 1 | LS | | |



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| | | labor not shown but obviously necessary for completion of the work. | | | | |
| | Furnish and Install New Electrical Panel 'H' | Measurement and payment for furnishing and installing new electrical panel 'H' will be based upon a lump sum price for the installation of the electrical panel as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment for furnishing and install new Electrical Panel 'H' will be made at the lump sum price for all work detail on the drawings which price shall constitute full compensation for completing said work, including mounting panel, electrical wire improvements and/or extensions, junction boxes, splicing necessary wires, testing, and other material and labor not shown but obviously necessary for completion of the work. | 1 | EA | | |
| | MISCELLANEOUS ELECTRICAL MATERIALS | Measurement for payment for Miscellaneous Electrical Materials will be based on a lump sum price and include all materials not described or shown in the Contract Documents. | | | | |
| | RELOCATE EXISTING LIFT STATION #01 ELECTRICAL SERVICE TO PUMP STATION MCC (ITEM #19) | Measurement and payment to relocate existing lift station #01 electrical service to the pump station MCC will be based upon a lump sum price for the installation of all wire and conduit for the relocation as shown in the drawings, all in accordance with the requirements of the Contract Documents. Payment to relocate existing lift station #01 electrical service to the pump station MCC will be made at the lump sum for all work detailed on the drawings which price shall constitute full compensation for completing said work, including excavation, concrete coring, concrete wall patching, obtaining all permits and inspections, conduits, pull-boxes, grounding, testing, cables, backfilling, compaction, conduit duct seal, and other material and labor not shown but obviously necessary for completion of the work. | 1 | LS | | |
| | MOBILIZATION | See Section 01505, "Mobilization" for payment limitations. Payment for mobilization will be made at the lump sum price. An initial lump sum partial payment of 40% of the Mobilization bid item amount shall be made upon completion of items #1-10 as outlined in Section 01505 Paragraph 1.01A. Payment of the remaining 60% for mobilization will be made in equal monthly lump sum amounts for | 1 | LS | | |



City of Cooper City, Florida
 ITB 2023-06-UTL, Pump Station #55 Generator Replacement

| | | | | | | |
|--------------------|--|---|---|----|--|--|
| | | the duration of the original contract time. | | | | |
| | MAINTENANCE OF TRAFFIC | See Section 01570 "Traffic Regulations" and all other references to traffic control and maintenance in this document and any regulatory requirements. Payment for maintenance of traffic will be made at the lump sum price named in the Item Response Form. Payment for maintenance of traffic will be made in equal monthly lump sum amounts for the duration of the original contract time. | 1 | LS | | |
| | PERFORMANCE AND PAYMENT GUARANTY AND INSURANCE | Payment for Performance and Payment Guarantee and Insurance will be made at the lump sum price named in the Item Response Form. The CONTRACTOR may request payment for this bid item after the Initial Notice to Proceed has been issued. Performance and Payment Guarantee and Insurance are limited to 3% of the Total Bid Price. Any amount in excess of 3% will be moved to Line-Item No. 3. However, the total bid amount will not change. The 3% ceiling on Performance and Payment Guarantee and Insurance is not responsiveness, just an instruction on the amount the CITY will pay for Performance and Payment Guarantee Insurance. | 1 | LS | | |
| Grand Total | | | | | | |



Grand Total Price (in words): _____

Submitted by:

(Print)

Authorized Signature:

(Sign)

Company Name:

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20 __, by: _____. | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT C REFERENCE FORM
(Page 1 of 2)

All references shall be from entities/companies regularly engaged in the business of providing the goods and/or services as described in this solicitation. **CITY OF COOPER CITY STAFF SHALL NOT BE USED AS A CLIENT REFERENCE.**

1. ENTITY/COMPANY NAME: _____
ADDRESS: _____
CONTACT NAME: _____
CONTACT'S TITLE: _____
TELEPHONE: _____
E-MAIL (REQUIRED): _____
CONTRACT PERIOD: FROM: _____ TO: _____
DESCRIPTION & FACILITY SIZE: _____

2. ENTITY/COMPANY NAME: _____
ADDRESS: _____
CONTACT NAME: _____
CONTACT'S TITLE: _____
TELEPHONE: _____
E-MAIL (REQUIRED): _____
CONTRACT PERIOD: FROM: _____ TO: _____
DESCRIPTION & FACILITY SIZE: _____



ATTACHMENT C
(Page 2 of 2)

3. ENTITY/COMPANY NAME: _____

ADDRESS: _____

CONTACT NAME: _____

CONTACT'S TITLE: _____

TELEPHONE: _____

E-MAIL (REQUIRED): _____

CONTRACT PERIOD: FROM: _____ TO: _____

DESCRIPTION & FACILITY SIZE: _____

This page shall be completed IN FULL and submitted with your bid.



ATTACHMENT D PUBLIC ENTITY CRIMES (PEC) FORM
(Page 1 of 3)

**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 sworn statement is submitted to the CITY OF COOPER CITY, FLORIDA

by: _____
(print individual's name and title)

for: _____
(print name of entity submitting sworn statement)

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is: _____.

*(If the entity has no FEIN, include the Social Security Number of the individual signing this
sworn statement: _____ - _____ - _____).*

2. I understand that a “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 of the United States, including but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentations.

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 any 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, non-jury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:



ATTACHMENT D
(Page 2 of 3)

- a) A predecessor or successor of a person convicted of a public entity crime; or
- b) 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 a “person” as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or 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 for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term “person” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

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

_____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, not any affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ This 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 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 subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer 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).



ATTACHMENT D
(Page 3 of 3)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 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 THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Signature

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____ | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT E ADA AFFIDAVIT
(Page 1 of 2)

**AMERICANS WITH DISABILITIES ACT (ADA)
DISABILITY NONDISCRIMINATION STATEMENT**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR
OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to the CITY OF COOPER CITY, FLORIDA

by: _____
(print individual's name and title)

for: _____
(print name of entity submitting sworn statement)

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is: _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____ - _____ - _____.)

I, being duly first sworn state:

That the above named firm, corporation or organization is in compliance with and agreed to continue to comply with, and assure that any subcontractor, or third party contractor under this project complies with all applicable requirements of the laws listed below including, but not limited to, those provisions pertaining to employment, provision of programs and services, transportation, communications, access to facilities, renovations, and new construction.

The American with Disabilities Act of 1990 (ADA), Pub. L. 101-336, 104 Stat 327, 42 USC 1210112213 and 47 USC Sections 225 and 661 including Title I, Employment; Title II, Public Services; Title III, Public Accommodations and Services Operated by Private entities; Title IV, Telecommunications; and Title V, Miscellaneous Provisions.

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ATTACHMENT E
(Page 2 of 2)

The Florida Americans with Disabilities Accessibility Implementation Act of 1993, Section 553.501-553.513, Florida Statutes:

The Rehabilitation Act of 1973, 229 USC Section 794;
The Federal Transit Act, as amended 49 USC Section 1612;
The Fair Housing Act as amended 42 USC Section 3601-3631.

Signature

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____ | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT G FOREIGN (NON-FLORIDA) CORPORATE STATEMENT (IF APPLICABLE)
(Page 1 of 2)

FOREIGN (NON-FLORIDA) CORPORATION MUST COMPLETE THIS FORM
DEPARTMENT OF STATE CORPORATE CHARTER NO. _____

If your corporation is exempt from the requirements of Section 607.1501, Florida Statutes, YOU MUST CHECK BELOW the reason(s) for the exemption. Please contact the Department of State, Division of Corporations at (850) 245-6051 for assistance with corporate registration or exemptions. 607.1501 Authority of foreign corporation to transact business required.

- (1) A foreign corporation may not transact business in this state until it obtains a certificate of authority form the Department of State.
- (2) The following activities, among others, do not constitute transacting business within the meaning of subsection one (1):
 - _____ (a) Maintaining, defending, or settling any proceedings.
 - _____ (b) Holding meetings of the board of directors or shareholders or carrying on other activities concerning internal corporate affairs.
 - _____ (c) Maintaining bank accounts.
 - _____ (d) Maintaining officers of agencies for the transfer, exchange, and registration of the corporation's own securities or maintaining trustees or depositories with respect to those securities.
 - _____ (e) Selling through independent contractors.
 - _____ (f) Soliciting or obtaining orders, whether by mail or through employees, agents or otherwise, if the orders
 - _____ (g) Creating or acquiring indebtedness, mortgages, and security interests in real or personal property.
 - _____ (h) Securing or collecting debts or enforcing mortgages and security interests in property securing the debts.
 - _____ (i) Transacting business in interstate commerce.
 - _____ (j) Conducting an isolated transaction that is completed within 30 days and that is not one in the course of repeated transactions of a like nature.
 - _____ (k) Owning and controlling a subsidiary corporation incorporated in or transacting business within this state or voting the stock of any corporation which it has lawfully acquired.
 - _____ (l) Owning a limited partnership interest in a limited partnership that is doing business within this state, unless such limited partner manages or controls the partnership or exercises the powers and duties of a general partner.
 - _____ (m) Owning, without more, real or personal property.

The list of activities of subsection (2) is not exhaustive.

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PROCEED TO NEXT PAGE



ATTACHMENT G
(Page 2 of 2)

- (3) This section has no application to the question of whether any foreign corporation is subject to service of process and suit in this state under any law of this state.

Please check one of the following if your firm in NOT a corporation:

- (I) _____ Partnership, Joint Venture, Estate or Trust
(II) _____ Sole Proprieties of Self Employed

NOTE: This sheet MUST be enclosed with your bid if you claim an exemption or have checked I or II above, your firm will be considered a corporation and subject to all requirements listed herein.

SIGNATURE OF AUTHORIZED AGENT OF PROPOSER

BIDDER'S LEGAL NAME



ATTACHMENT H W-9, REQUEST FOR TAXPAYER IDENTIFICATION NUMBER

Form W-9 Request for Taxpayer Identification Number and Certification. Give Form to the requester. Do not send to the IRS.

Form fields 1-7: Name, Business name, Tax classification, Exemptions, Address, City, ZIP code, List account number(s).

Part I Taxpayer Identification Number (TIN). Enter your TIN in the appropriate box. Social security number or Employer identification number.

Part II Certification. Under penalties of perjury, I certify that: 1. The number shown on this form is my correct taxpayer identification number... Certification instructions.

Sign Here. Signature of U.S. person, Click Here to Sign, Date.

General Instructions. Section references are to the Internal Revenue Code unless otherwise noted. Future developments. Information about developments affecting Form W-9... 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)...



ATTACHMENT I PROOF OF WORKERS COMPENSATION INSURANCE OR EXEMPTION

Dear Provider of Services or Goods:

In order to provide services or goods to City of Cooper City, we require that you provide us either proof of workers' compensation coverage or proof of exemption.

Workers' compensation insurance is required of all employers in Florida that employ 4 or more part or full time employees. In the event that you are an employer in the construction industry, you are required to have workers' compensation insurance if you employ one or more workers. Corporate officers and sole proprietors are included when calculating the number of employees. Note: Corporate officers may claim exemption from workers' compensation coverage on themselves only, by filing *Form DWC 250, Notice of Election to Be Exempt*. This form can be found at <https://www.floridawc.com/workers-comp-insurance/flwc/2011/04/exemptionform.pdf>

If you meet the above criteria to be exempt, you MUST provide us with one of the following:

- If your business is a sole proprietorship or unincorporated business: provide us a Verification of Automatic Exempt Certificate. This verification is a letter that is issued by the State of Florida Department of Financial Services. To receive a letter from the State, complete the following directions: 1) Call the National Council of Compensation Insurance 1-800-622-4123, Option 5, and ask them for the class code for your type of business. 2) Once you have received this code, call the Department of Financial Services at 1-850-413-1601 and provide them your business name, class code, mailing address, and contact phone number. They will send you the Verification of Automatic Exempt Certificate. 3) Provide us a copy of the Verification of Automatic Exempt Certificate.
- If your business is a corporation (including a professional association or limited liability company), and you are not required to have workers' compensation insurance as per the requirements as outlined above, you must complete the attached Workers' compensation Exemption Affidavit, have it notarized, and return the original to us.

If you are an employer that meets the requirements of workers' compensation and need to obtain coverage, contact your current business insurance agent, or you may use the following resources to locate an agent: www.fuia.com, www.piafl.org, or call (850) 893-8245.

Please be reminded that the furnishing of this information to City of Cooper City is a non-negotiable requirement to perform services for us. Failure to provide this information in a timely manner may result in either termination of your services or delay of payment for services. Your workers' compensation Certificate of Coverage, Workers' Compensation Exemption Affidavit, or Verification of Automatic Exempt Certificate must be delivered or mailed to the Purchasing Division located at City Hall, 9090 SW 50th Place, Cooper City, Florida 33328, or emailed to Purchasing@CooperCity.gov



ATTACHMENT J PROOF OF LIABILITY INSURANCE

REQUEST FOR CERTIFICATE(S) OF INSURANCE

Dear Valued Vendor:

It is the City of Cooper City's policy to work only with properly insured companies. Please provide current Certificates of Insurance that include the following minimum coverages:

- Comprehensive General Liability Insurance - \$1,000,000 combined single limit of insurance per occurrence and \$2,000,000 in the general aggregate for Bodily Injury and Property Damage and \$3,000,000 general aggregate for Products/Completed Operations. Comprehensive General Liability insurance shall include endorsements for property damage, personal injury, contractual liability, completed operations, products liability and independent contractor's coverage.
- Workers' Compensation Insurance - Company shall provide coverage for its employees with statutory workers' compensation limits, and no less than \$500,000 for Employers' Liability. Said coverage shall include a blanket waiver of subrogation in favor of the City and its agents, employees and officials.
- Comprehensive Automobile Liability Insurance - Company shall provide coverage for all owned, non-owned and hired vehicles with limits of not less than \$1,000,000, per occurrence, Combined Single Limits (CSL) or its equivalent.
- Professional Liability (Errors & Omissions) – When applicable to Company's line of work, vendors of professional services shall provide coverage for all claims arising out of the services performed with limits not less than \$1,000,000 per claim. The aggregate limit shall either apply separately to this contract or shall be at least twice the required per claim limit. Company shall either require of its Subcontractors to procure and to maintain Subcontractor's Comprehensive General Insurance and Automobile Liability Insurance of the type and in the same amounts specified above or insure the activities of its Subcontractors in the Bidder's own policies.

No later than fifteen (15) days prior to the commencement of the project, Contractor, at its own expense, shall provide the City with a certificate of liability insurance and a copy of the additional insured endorsement naming the City of Cooper City its employees, directors, officers, agents, independent contractors, successors and assigns, and other authorized representatives as additional insured on a primary and non-contributory basis for all applicable policies. Additionally, the Contractor shall provide the City with a copy of the certificates of insurance and a copy of the additional insured endorsement reflecting the same insurance coverage for all subcontractors utilized by Contractor.

The City shall be granted a blanket Waiver of Subrogation on all applicable policies, and affirmed on the Certificate of Liability Insurance and the policy endorsement. The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, agents and volunteers for all losses or damages.

To ensure compliance, your insurance agent/company must provide your certificate(s) directly to the City. Certificates may be emailed to Purchasing@CooperCity.gov or mailed to City of Cooper City, Attn: Purchasing Division, 9090 SW 50th Place, Cooper City, FL 33328.

Thank you for your prompt attention to this request. If you have any questions, please email the Purchasing Division at Purchasing@CooperCityFL.org, or call 954-434-4300.



ATTACHMENT K OWNERSHIP DISCLOSURE AFFIDAVIT

- 1. If the contact or business transaction is with a corporation, the full legal name and business address shall be provided for each officer and director and each stockholder who holds directly or indirectly five percent (5%) or more of the corporation's stock. If the contract or business transaction is with a trust, the full legal name and address shall be provided for each trustee and each beneficiary. All such names and addresses are (Post Office addresses are not acceptable), as follows:

| <u>Full Legal Name</u> | <u>Address</u> | <u>Ownership</u> |
|------------------------|----------------|------------------|
| _____ | _____ | _____ % |
| _____ | _____ | _____ % |
| _____ | _____ | _____ % |

- 2. The full legal names and business address of any other individual (other than subcontractors, materialmen, suppliers, laborers, or lenders) who have, or will have, any interest (legal, equitable, beneficial or otherwise) in the contract or business transaction with the City are (Post Office addresses are not acceptable), as follows:

Signature of Affiant

Print Name

Date

STATE: **FLORIDA**
COUNTY: _____

Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____
Name of person making statement

Signature of Notary Public - State of Florida

(NOTARY SEAL)

Name of Notary Typed, Printed, or Stamped

Personally Known _____ **OR** Produced Identification _____
Type of Identification Produced _____



ATTACHMENT L DRUG FREE WORKPLACE CERTIFICATE

I, the undersigned, in accordance with Florida Statute 287.087, hereby certify that, **(print or type name of firm)**

- Publishes a written statement notifying that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace named above, and specifying actions that will be taken against violations of such prohibition.
- Informs employees about the dangers of drug abuse in the work place, the firm’s policy of maintaining a drug free working environment, and available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug use violations.
- Gives each employee engaged in providing commodities or contractual services that are under bid or proposal, a copy of the statement specified above.
- Notifies the employees that as a condition of working on the commodities or contractual services that are under bid or proposal, the employee will abide by the terms of the statement and will notify the employer of any conviction of, pleas of guilty or nolo contendere to, any violation of Chapter 1893, or of any controlled substance law of the State of Florida or the United States, for a violation occurring in the work place, no later than five (5) days after such conviction, and requires employees to sign copies of such written (*) statement to acknowledge their receipt.
- Imposes a sanction on, or requires 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.
- Makes a good faith effort to continue to maintain a drug free work place through the implementation of the drug free workplace program.

“As a person authorized to sign this statement, I certify that the above named business, firm or corporation complies fully with the requirements set forth herein”.

Signature of Affiant

Print Name

Date

| | |
|--|----------------|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20 __, by: _____ | |
| <i>Name of person making statement</i> | |
| _____ <i>Signature of Notary Public - State of Florida</i> | |
| (NOTARY SEAL) | |
| _____ <i>Name of Notary Typed, Printed, or Stamped</i> | |
| Personally Known _____ OR Produced Identification _____ | |
| Type of Identification Produced _____ | |



ATTACHMENT M EMPLOYEE BACKGROUND VERIFICATION AFFIDAVIT

I, _____ of _____, attest that all personnel used in
(Print Name) (Company Name)

the performance of this work have had a criminal background check with a passing grade;
and have been drug tested with a passing grade and are legally documented to work in the United
States.

Signature of Affiant

Print Name

Date

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____ | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT N SCRUTINIZED COMPANIES AFFIDAVIT
(Page 1 of 2)

Certification pursuant to Florida Statute § 287.135 and § 215.473

I, _____, on behalf of, _____
Print Name and Title **Company Name**

certify that _____ does not:
Company Name

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies that Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City shall provide notice, in writing, to the Contractor of the City’s determination concerning the false certification. The Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Contractor does not demonstrate that the City’s determination of false certification was made in error then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes, prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and

2) Contracting with companies, for goods or services over \$1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.



ATTACHMENT N
(Page 2 of 2)

As the person authorized to sign on behalf of the Contractor, I hereby certify that the company identified above in the section entitled "Contractor Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, and is not engaged in business operations in Syria. I understand that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan list or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

COMPANY NAME

PRINT NAME

TITLE

SIGNATURE

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____ | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT O
(Page 2 of 2)

By the signature(s) below, I/we, the undersigned, as authorized signatory to commit the firm, certify that the information as provided in this attachment is true and correct at the time of submission.

Signature of Affiant

Date

Printed Name & Title of Affiant

| | |
|---|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____ | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT P E-VERIFY FORM
(Page 1 of 3)

E-VERIFY FORM UNDER SECTION 448.095, FLORIDA STATUTES

TO BE RETURNED WITH PROPOSAL

Project Name:

Project No.:

1. Definitions:

“Contractor” means a person or entity that has entered or is attempting to enter into a contract with a public employer to provide labor, supplies, or services to such employer in exchange for salary, wages, or other remuneration. “Contractor” includes, but is not limited to, a vendor or consultant.

“Subcontractor” means a person or entity that provides labor, supplies, or services to or for a contractor or another subcontractor in exchange for salary, wages, or other remuneration.

“E-Verify system” means an Internet-based system operated by the United States Department of Homeland Security that allows participating employers to electronically verify the employment eligibility of newly hired employees.

2. Effective January 1, 2021, Contractors, shall register with and use the E-verify system in order to verify the work authorization status of all newly hired employees. Contractor shall register for and utilize the U.S. Department of Homeland Security’s E-Verify System to verify the employment eligibility of:

- a) All persons employed by a Contractor to perform employment duties within Florida during the term of the contract; and
- b) All persons (including sub vendors/subconsultants/subcontractors) assigned by Contractor to perform work pursuant to the contract with the City of Cooper City. The Contractor acknowledges and agrees that registration and use of the U.S. Department of Homeland Security’s E-Verify System during the term of the contract is a condition of the contract with the City of Cooper City; and



ATTACHMENT P
(Page 2 of 3)

- c) Should bidder become the successful Contractor awarded for the above-named project, by entering into the contract, the Contractor shall comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility," as amended from time to time. This includes, but is not limited to registration and utilization of the E-Verify System to verify the work authorization status of all newly hired employees. Contractor shall also require all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. The Contractor shall maintain a copy of such affidavit for the duration of the contract.
3. Contract Termination
- a) If the City has a good faith belief that a person or entity with which it is contracting has knowingly violated s. 448.09 (1) Fla. Stat., the contract shall be terminated.
- b) If the City has a good faith belief that a subcontractor knowingly violated s. 448.095 (2), but the Contractor otherwise complied with s. 448.095 (2) Fla. Stat., shall promptly notify the Contractor and order the Contractor to immediately terminate the contract with the subcontractor.
- c) A contract terminated under subparagraph a) or b) is not a breach of contract and may not be considered as such.
- d) Any challenge to termination under this provision must be filed in the Circuit Court no later than 20 calendar days after the date of termination.
- e) If the contract is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of 1 year after the date of termination.



ATTACHMENT P
(Page 3 of 3)

| |
|-----------------------|
| Company Name: |
| Authorized Signature: |
| Print Name: |
| Title |
| Date: |
| Phone: |

| |
|--|
| STATE: FLORIDA |
| COUNTY: _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20 __, by: _____ <i>Name of person making statement</i> |
| (NOTARY SEAL) _____ <i>Signature of Notary Public - State of Florida</i> |
| _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ OR Produced Identification _____ |
| Type of Identification Produced _____ |



ATTACHMENT Q CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

SUBCONTRACTOR COVERED TRANSACTIONS

- (1) The prospective subcontractor, _____, of the Sub-Recipient certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the Sub-Recipient’s subcontractor is unable to certify to the above statement, the prospective subcontractor shall attach an explanation to this form.

SUBCONTRACTOR

By: _____
Signature

Name and Title

Street Address

City, State, Zip

Date

City of Cooper City _____

Sub-Recipient’s Name

DEM Contract Number [N/A]

FEMA Project Number [N/A]



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

ATTACHMENT R BID BOND (5%)



ATTACHMENT S GENERATOR PRODUCT SPECIFICATIONS



ATTACHMENT T GENERATOR PRODUCT WARRANTY



ATTACHMENT U BUY AMERICAN ACT AFFIDAVIT
(Page 1 of 2)

BUY AMERICAN ACT
(THIS ATTACHMENT IS NOT APPLICABLE TO THIS PROJECT)

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to the CITY OF COOPER CITY, FLORIDA

by: _____
(print individual's name and title)

for: _____
(print name of entity submitting sworn statement)

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is: _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____ - _____ - _____.)

I, being duly first sworn state:

That the above named firm, corporation or organization is in compliance with and agreed to continue to comply with, and assure that any subcontractor, or third party contractor under this project complies with all applicable requirements of the laws listed below including, but not limited to, those provisions pertaining to employment, provision of programs and services, transportation, communications, access to facilities, renovations, and new construction.

As required by the Buy American provision, all products must be of domestic origin as required by 41 U.S.C. Ch. 83.

Exceptions to the Buy American provision should be used as a last resort; however, an alternative or exception may be approved upon request. To be considered for the alternative or exception, the request must be submitted in writing to a designated official. The request must include the:

- Alternative substitute(s) that are domestic and meet the required specifications:
 - Availability of the domestic alternative substitute(s) in relation to the quantity ordered
- Reason for exception: limited/lack of availability or price (include price):
 - Price of the domestic product; and
 - Price of the non-domestic product that meets the required specification of the domestic product.



ATTACHMENT U
(Page 2 of 2)

The Respondent agrees that, to the greatest extent applicable, all equipment and products being proposed shall be American-made.

Signature of Affiant

Date

Print Name

| | |
|--|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____. | |
| | <i>Name of person making statement</i> |
| (NOTARY SEAL) | _____ <i>Signature of Notary Public - State of Florida</i> |
| | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |



ATTACHMENT V PROHIBITION AGAINST CONSIDERATION OF SOCIAL, POLITICAL OR IDEOLOGICAL INTERESTS AFFIDAVIT

I, _____, being first duly sworn state:

Respondents are hereby notified of the provisions of section 287.05701, Florida Statutes, as amended, that the City will not request documentation of or consider a Respondent’s social, political, or ideological interests when determining if the Respondent is a responsible Respondent. Respondents are further notified that the City’s governing body may not give preference to a Respondent based on the Respondent’s social, political, or ideological interests.

Signature of Affiant

Date

Print Name

| | |
|--|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____. | |
| | <i>Name of person making statement</i> |
| (NOTARY SEAL) | _____ <i>Signature of Notary Public - State of Florida</i> |
| | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ OR Produced Identification _____ | |
| Type of Identification Produced _____ | |



ATTACHMENT W COMPLIANCE WITH FOREIGN ENTITY LAWS AFFIDAVIT

This sworn statement is submitted to the CITY OF COOPER CITY, FLORIDA

by: _____
(print individual's name and title)

for: _____
(print name of entity submitting sworn statement)

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is: _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____ - _____ - _____.)

The company hereby attests under penalty of perjury the following:

- A. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes. (Source: § 287.138(2)(a), Florida Statutes)
- B. The government of a foreign country of concern does not have a controlling interest in Entity. (Source: § 287.138(2)(b), Florida Statutes)
- C. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes. (Source: § 288.007(2), Florida Statutes)
- D. Entity is not a partnership, association, corporation, organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity. (Source: § 288.007(2), Florida Statutes)
- E. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes. (Source: § 692.202(5)(a)(1), Florida Statutes)
- F. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.
- G. (Only applicable if purchasing real property) Entity is not a foreign principal prohibited from purchasing the subject real property. Entity is either (a) not a person or entity described in Section 692.204(1)(a), Florida Statutes, or (b) authorized under Section 692.204(2), Florida Statutes, to purchase the subject property. Entity is in compliance with the requirements of Section 692.204, Florida Statutes. (Source: §§ 692.203(6)(a), 692.204(6)(a), Florida Statutes)



ATTACHMENT W
(Page 2 of 2)

Signature of Affiant

Date

Print Name

| | |
|--|---|
| STATE: | FLORIDA |
| COUNTY: | _____ |
| Sworn to (or affirmed) and subscribed before me this ____ day of _____, 20__, by: _____. | |
| | <i>Name of person making statement</i> |
| | _____ <i>Signature of Notary Public - State of Florida</i> |
| (NOTARY SEAL) | _____ <i>Name of Notary Typed, Printed, or Stamped</i> |
| Personally Known _____ | OR Produced Identification _____ |
| Type of Identification Produced _____ | |

[END OF SECTION]



SUMMARY TERMS AND CONDITIONS

**CONTRACT BETWEEN COOPER CITY AND _____
 FOR _____**

| | |
|-------------------------|---|
| Project Title: | Pump Station #55 Generator Replacement |
| Location: | 9070 SW 51st St, Cooper City, FL 33328 |
| ITB Number: | 2023-06-UTL |
| Contract Number: | |
| Project Number: | |

| | |
|------------------------------------|------------|
| General Contractor: | |
| Contractor Address: | |
| Federal Identification No.: | __ - _____ |

| | |
|--|--|
| Contract Administrator: | |
| Contract Administrator Address: | |

| | |
|----------------------------|---|
| Consultant: | Chen Moore and Associates |
| Consultant Address: | 500 W Cypress Creek Road, Suite 600 Fort Lauderdale, FL 33309 |

| Article | Description | Unit |
|---------|--|---|
| 3.2 | Substantial Completion | 370 Days after the Project Initiation Date in NTP |
| 3.2 | Final Completion | 30 Days after Substantial Completion |
| 3.3 | [If applicable] Liquidated Damages for each calendar day after time specified in Notice to Proceed | \$_____ per day |
| 3.3 | Liquidated Damages for each calendar day after time specified for Substantial Completion | \$500 per day |
| 3.3 | Liquidated Damages for each calendar day after time specified for Final Completion | \$500 per day |
| 3.3 | [If applicable] Liquidated Damages for each calendar day after time specified for interim Milestones (or phase): [Milestones 1, 2, 3, etc.: Division 1, Section _____] | Interim Milestone #1 \$_____ per day |
| | | Interim Milestone #2 \$_____ per day |
| | | Interim Milestone #3 \$_____ per day |



City of Cooper City, Florida
 ITB 2023-06-UTL, Pump Station #55 Generator Replacement

| Article | Description | Unit |
|----------------------------|---|--|
| 8.4 | The Parties designate the following as the respective places for giving of notice: | For City: _____ _____ For Contractor: _____ _____ |
| 42 (General Conditions) | Compensable Excusable Delay for each calendar day beyond the Contract Time. | \$365 per day |
| 54 (General Conditions) | <input type="checkbox"/> County Business Enterprise (CBE) or Small Business Enterprise (SBE) commitment | As awarded _____% |

[END OF SECTION]



AGREEMENT

THIS IS AN AGREEMENT (“Agreement”), dated this ____ day of _____ 20____, by and between:

CITY OF COOPER CITY, a municipal corporation organized and existing under the laws of the State of Florida and whose address is 9090 SW 50th Place, Cooper City, Florida 33328 (“City”),

and

_____ a _____ corporation, located at _____, hereinafter "Contractor," who is authorized to do business in the State of Florida.

City and Contractor may each be referred to herein as “party” or collectively as “parties

WITNESSETH

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the receipt and adequacy of which are acknowledged, the parties agree as follows:

PREAMBLE

In order to establish the background, context and form of reference for this Agreement and to generally express the objectives, and intensions of the respective parties herein, the following statements, representations and explanations shall be accepted as predicates for the undertakings and commitments included within the provisions which follow and may be relied upon the parties as essential elements of the mutual considerations upon which this Agreement is based.

ARTICLE 1. DEFINITIONS

Whenever the following terms appear in the Contract Documents, the intent and meaning shall be interpreted as follows:

- 1.1. **Applicable Law** means all applicable laws, codes, advisory circulars, rules, regulations, or ordinances of any federal, state, county, municipal, or other governmental entity, including as may be amended from time to time.
- 1.2. **Bidder** means an entity or individual submitting a bid for this Project, acting directly or through a duly authorized representative.
- 1.3. **City** means the City Commission of Cooper City, Florida, its successors and assigns.
- 1.4. **Code** means the City of Cooper City Code of Ordinances.



- 1.5. **Change Order** means a written document ordering a change in the Contract Price or Contract Time or a material change in the Work.
- 1.6. **Consultant** means the architect or engineer who has contracted with City of Cooper City or who is an employee of City of Cooper City, and provides professional services for this Project.
- 1.7. **Contract Administrator** means the Director of Utilities or Assistant Director of Utilities or such other person designated by the Director of Utilities in writing.
- 1.8. **Contract Documents** means the official documents setting forth bidding information, requirements, and contractual obligations for the Project and includes Articles 1 through 8 of this Contract, the Contract Supplement, the General Conditions, the Supplemental General Conditions, the Scope of Work, Invitation to Bid, Addenda, Standard Instructions for Vendors, Special Instructions for Vendors, Plans, Drawings, Exhibits, General Requirements, Technical Specifications, Bid Forms, Record of Award by Board, Bonds, Notice of Award, Notice(s) to Proceed, Supplements, Representations and Certifications, Certificates, Project Forms, Closeout Forms, Purchase Order(s), Change Order(s), Field Order(s), Special Provisions, BIM and Electronic Media Submittal Requirements, and any additional documents the submission of which is required by this Project.
- 1.9. **Contract Price** means the amount established in the bid submittal and award by the Board, as may be amended by Change Order.
- 1.10. **Contract Time** means the time between commencement and completion of the Work, including any milestone dates thereof, established in Article 3 of this Contract, as may be amended by Change Order.
- 1.11. **Contractor** means the person, firm, or corporation with whom City of Cooper City has contracted and who is responsible for the acceptable performance of the Work and for the payment of all legal debts or other obligations pertaining to the Work. All references in the Contract Documents to third parties under contract or control of Contractor shall be deemed to be a reference to Contractor.
- 1.12. **County Business Enterprise** or **CBE** means a small business certified as meeting the applicable requirements of the Broward County Business Opportunity Act of 2012, Section 1-81, of the Code. Unless specified in the Contract Documents, this definition may not apply.
- 1.13. **Field Order** means a written order that orders minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.
- 1.14. **Final Completion** means the date certified by Consultant in the Final Certificate of Payment upon which all conditions and requirements of any permits and regulatory agencies have been satisfied; any documents required by the Contract Documents have been received by Consultant; any other documents required to be provided by Contractor have been received by Consultant; and to the best of Consultant's knowledge, information and belief, the Work defined



herein has been fully completed in accordance with the terms and conditions of the Contract Documents.

1.15. **Materials** means materials incorporated in this Project or used or consumed in the performance of the Work.

1.16. **Notice(s) to Proceed** means a written notice to Contractor authorizing the commencement of the activities identified in the notice or as described in the Contract Documents.

1.17. **Plans or Drawings** means the official graphic representations of this Project that are a part of the Contract Documents.

1.18. **Project** means the construction project described in the Contract Documents, including the Work described therein.

1.19. **Project Initiation Date** means the date upon which the Contract Time commences.

1.20. **Small Business Enterprise or SBE** means an entity certified as meeting the applicable requirements of the Broward County Business Opportunity Act of 2012, Section 1-81, of the Code. Unless specified in the Contract Documents, this definition may not apply.

1.21. **Subcontractor** means a person, firm, or corporation having a direct contract with Contractor, including one who furnishes material worked to a special design according to the Contract Documents, but does not include one who merely furnishes Materials not so worked.

1.22. **Substantial Completion** means that date, as certified in writing by Consultant and as finally determined by Contract Administrator in its sole discretion, on which the Work, or a portion thereof, is at a level of completion in substantial compliance with the Contract Documents such that all conditions of permits and regulatory agencies have been satisfied and City of Cooper City or its designee can enjoy use or occupancy and can use or operate it in all respects for its intended purpose. A Certificate of Occupancy (or a Temporary Certificate of Occupancy (“TCO”) or other alternate municipal/ City of Cooper City authorization for limited or conditional occupancy acceptable to the Contract Administrator) must be issued for Substantial Completion to be achieved; however, the issuance of a Certificate of Occupancy will not, by itself, constitute the achievement or date of Substantial Completion.

1.23. **Surety** means the surety company or individual that is bound by the performance bond and payment bond with and for Contractor who is primarily liable for satisfactory performance of the Work, and which surety company or individual is responsible for Contractor’s satisfactory performance of the Work under this Contract and for the payment of all debts and other obligations pertaining thereto in accordance with Section 255.05, Florida Statutes.

1.24. **Work** means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment, and services



provided or to be provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a part of the Project.

ARTICLE 2. SCOPE OF WORK

Contractor hereby agrees to furnish all of the labor, materials, equipment, services, and incidentals necessary to perform all of the Work described in the Contract Documents for the Project.

ARTICLE 3. CONTRACT TIME

3.1. Contractor shall be instructed to commence the Work by written instruction in the form of a Purchase Order issued by City's Finance Director or designee and two or more Notices to Proceed issued by the Contract Administrator. The first Notice to Proceed and Purchase Order will not be issued until Contractor's submission to City of Cooper City of all required documents and after execution of this Contract by both Parties. Preliminary Work, including submission of a project schedule, schedule of values, submittals, submittal schedule, and other documents required for permitting, and performance of Work that does not require permits, shall commence within ten (10) days after the date of the first Notice to Proceed. Contractor shall have ten (10) days after receipt of signed and sealed contract Drawings from Consultant to apply for construction permits to the applicable permitting authority. Issuance of all permits by the permitting authority shall be a condition precedent to the issuance of a second Notice to Proceed for all additional Work. Except for the reimbursement of permit application fees, impact fees, and performance and payment bond premiums as may be provided in the Contract Documents, Contractor shall not be entitled to compensation of any kind during the permitting process. The Work to be performed pursuant to the second Notice to Proceed shall commence within ten (10) days after the Project Initiation Date specified in the second Notice to Proceed.

3.2. Time is of the essence for each Party's performance under this Contract. Contractor must obtain Substantial Completion of the Work within 370 calendar days after the Project Initiation Date specified in the second Notice to Proceed, and Final Completion within 30 calendar days after Substantial Completion. Time is of the essence for this project, accordingly the City is anticipating that Substantial Completion of the Work will occur no later than 370 calendar days after the Project Initiation Date, and Final Completion will occur no later than 30 calendar days after Substantial Completion. Bidders are encouraged to submit in their Bid Proposal their expected timeframes for Substantial Completion and Final Completion of the Work that are earlier (or later) in time than the City's anticipated timeframes.

3.3. Upon failure of Contractor to obtain Substantial Completion within the deadline stated in Section 3.2, as extended by any approved time extensions, Contractor shall pay to City of Cooper City the sum of one thousand dollars (\$500) for each day after the deadline for Substantial Completion, as extended by any approved time extensions, until Substantial Completion is obtained. After Substantial Completion, should Contractor fail to complete the remaining Work



within the deadline stated in Section 3.2, as extended by approved time extensions thereof, Contractor shall pay to City of Cooper City the sum of one thousand dollars (\$500) for each day after the deadline for Final Completion, as extended by any approved extensions, until Final Completion is obtained. These amounts are not penalties but are liquidated damages to City of Cooper City for its inability to obtain full beneficial occupancy and/or use of the Project. Liquidated damages are hereby fixed and agreed upon between the Parties based on (1) a mutual recognition of the impossibility of precisely ascertaining the amount of damages that will be sustained by City of Cooper City as a consequence of Contractor's failure to timely obtain Substantial Completion; and (2) both Parties' desire to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of Contractor to complete this Contract on time. These liquidated damages shall apply separately to each portion of the Project for which a deadline for completion is given.

3.4. City of Cooper City may deduct liquidated damages from monies due to Contractor for the Work under this Contract or as much thereof as City of Cooper City may, in its sole discretion, deem just and reasonable.

3.5. Contractor shall reimburse City, in addition to liquidated damages, for all costs incurred by Consultant in administering the construction of the Project beyond the completion dates specified above, as extended by any approved time extensions. Consultant construction administration costs shall be in the amounts set forth in the contract between City of Cooper City and Consultant, a copy of which is available upon request of the Contract Administrator. All such costs shall be deducted from the monies due Contractor for performance of Work under this Contract by means of unilateral credit Change Orders issued by City of Cooper City as costs are incurred by Consultant and agreed to by City.

ARTICLE 4. CONTRACT PRICE

4.1. This is a Unit Price Contract:*

4.1.1. City of Cooper City shall pay to Contractor the amounts determined for the total number of each of the units of Work completed at the unit price stated in the Contract Price. The number of units contained in this schedule is an estimate only, and final payment shall be made for the actual number of units incorporated in or made necessary by the Work covered by the Contract Documents.

4.1.2. Payment shall be made at the unit prices applicable to each integral part of the Work. These prices shall be full compensation for all costs, including overhead and profit, associated with completion of all the Work in full conformity with the requirements as stated or shown, or both, in the Contract Documents. The cost of any item of Work not covered by a specific Contract unit price shall be included in the Contract unit price or lump sum price to which the item is most applicable.



4.2. This is a Lump Sum Contract.*

4.2.1. City of Cooper City shall pay Contractor the Contract Price for the performance of the Work described in the Contract Documents.

4.2.2. Payment shall be at the lump sum price stated in this Contract. This price shall be full compensation for all costs, including overhead and profit, associated with completion of all the Work in full conformity with the requirements as stated or shown, or both, in the Contract Documents. The cost of any item of Work not covered by a specific Contract lump sum should be included in the lump sum price to which the item is most applicable.

*Note: Only the subsections corresponding to any checked box in this Article 4 will apply to this Contract. Some Projects include both unit prices and lump sums, in which case both subsections shall apply as appropriate depending upon the type of Work being performed by Contractor and approved by City.

ARTICLE 5. PROGRESS PAYMENTS

5.1. Contractor may make an application for payment (“Application for Payment”), at intervals of not more than once a month, for Work completed during the Project. Contractor shall, where the Project involves CBE or SBE Subcontractors, make Application for Payment, at monthly intervals, for Work completed by such Subcontractors during the Project. Contractor’s applications shall show a complete breakdown of the Project components, the quantities completed, and the amount of payment sought, together with such supporting evidence as may be required by Consultant or Contract Administrator. Contractor shall submit with each Application for Payment: an updated progress schedule acceptable to Consultant as required by the Contract Documents; a Certification of Payments to Subcontractors Form (Form 9); a statement indicating the cumulative amount of CBE or SBE participation to date; and a release of claims relative to the Work that was the subject of previous applications or consent of surety relative to the Work that is the subject of the Application for Payment. If Contractor has not made payment to a Subcontractor, the Certification of Payments to Subcontractors Form shall be accompanied by a copy of the notification sent to each Subcontractor (listed in Item 2 of the Form) to whom payment has not been made, explaining the good cause why payment was not made. When applicable, an Application for Payment shall be accompanied by a completed Statement of Wage Compliance Form (Form 8A or 8B). Each Application for Payment shall be submitted in triplicate to Consultant for approval as follows:

CONSULTANT _____ with a copy to:

CONTRACT ADMINISTRATOR _____

All Applications for Payment shall be stamped as received on the date on which they are delivered in the manner specified above. Payments of Applications for Payment shall be subject to approval as specified hereinbefore, and if approved shall be due twenty-five (25) business days after the



date on which the Application for Payment is stamped received. At the end of the twenty-five (25) business days, Contractor may send the Contract Administrator an overdue notice. If the Application for Payment is not rejected within four (4) business days after delivery of the overdue notice, the Application for Payment shall be deemed accepted, except for any portion of the Application for Payment that City of Cooper City determines to be fraudulent or misleading. If the Application for Payment does not meet the requirements of this Contract, City of Cooper City shall reject the Application for Payment within twenty (20) business days after the date stamped received and said rejection shall specify the deficiency and the action necessary to cure that deficiency. If Contractor submits a request that corrects the deficiency, the corrected Application for Payment must be paid or rejected within ten (10) business days after the corrected Application for Payment is stamped as received. Any dispute between City of Cooper City and Contractor shall be resolved by the Florida Statute 218.735 subject to the process and time frames for payment set forth above. For all other disputes related to payment, the dispute shall be resolved pursuant to the dispute resolution procedure set forth in Article 12 of the General Conditions.

5.2. City of Cooper City may withhold retainage on each progress payment as set forth in Section 255.078, Florida Statutes, as may be amended during this Contract. Any reduction in retainage below the maximum amount set forth in Section 255.078, Florida Statutes, shall be at the sole discretion of the Contract Administrator, as may be recommended by Consultant. Any interest earned on retainage shall accrue to the benefit of City.

5.3. Notwithstanding any provision of this Contract to the contrary, City of Cooper City may withhold payment, in whole or in part, in accordance with Applicable Law, or to such extent as may be necessary to protect itself from loss on account of:

5.3.1 Inadequate or defective Work not remedied.

5.3.2 Claims filed or reasonable evidence indicating probable filing of claims by other parties against Contractor or City of Cooper City relating to Contractor's performance.

5.3.3 Failure of Contractor to make payments properly to Subcontractors or for material or labor.

5.3.4 Damage to another contractor not remedied.

5.3.5 Liquidated damages and costs incurred by Consultant for extended construction administration.

5.3.6 Failure of Contractor to provide documents required by the Contract Documents.

When the above grounds are removed or resolved to the satisfaction of the Contract Administrator, any withheld payment shall be made to the extent otherwise due.



5.4 Invoices shall be emailed MONTHLY to Accountspayable@CooperCity.gov or sent via US Mail to City of Cooper City, 9090 SW 50th Place, Cooper City, FL 33328. All invoices must reference the applicable Work Authorization and/or Bid number.

ARTICLE 6. ACCEPTANCE AND FINAL PAYMENT

6.1. Upon receipt of written notice from Contractor that the Work is ready for final inspection and acceptance, Consultant shall conduct an inspection within ten (10) days. If Consultant and Contract Administrator find that the Work is acceptable; that the requisite documents have been submitted; that the requirements of the Contract Documents are fully satisfied; and that all conditions of the permits and regulatory agencies have been met, a Final Certificate of Payment (Form 11) shall be issued by Consultant, under its signature, stating that the requirements of the Contract Documents have been performed and that the Work is ready for acceptance under the terms and conditions of the Contract Documents.

6.2. Before issuance of the Final Certificate for Payment, Contractor shall deliver to Consultant the following Final Payment Package: a complete release of all claims arising out of this Contract, or receipts in full in lieu thereof; an affidavit certifying that all suppliers and Subcontractors have been paid in full and that all other indebtedness and financial obligations connected with the Work have been paid, or, in the alternative, a consent of the Surety to final payment on Contractor's behalf; the final corrected as-built Drawings; and the final bill of Materials, if required, and the final Application for Payment. This Final Payment Package must include the certification document titled Final List of Non-Certified Subcontractors and Suppliers (Form 13), which must be signed and notarized by Contractor. A list of all noncertified Subcontractors and suppliers used must be attached to this certified document.

6.3. If, after Substantial Completion, Final Completion is materially delayed through no fault of Contractor, and Consultant so certifies, City of Cooper City shall, upon certification of Consultant, and without terminating this Contract, make payment of the balance due for any portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, but it shall not constitute a waiver of claims.

6.4. Final payment shall be made only after the Board or Director of Purchasing, as applicable, has reviewed a written evaluation of the performance of Contractor prepared by the Contract Administrator and has approved the final payment. The acceptance of final payment shall constitute a waiver of all claims by Contractor, except those previously made in strict accordance with the provisions of the General Conditions and identified by Contractor as unsettled at the time of the application for final payment.

ARTICLE 7. REPRESENTATIONS AND WARRANTIES

7.1. Representation of Authority. Contractor represents and warrants that this Contract constitutes the legal, valid, binding, and enforceable obligation of Contractor, and that neither the execution nor performance of this Contract constitutes a breach of any agreement that



Contractor has with any third party or violates Applicable Law. Contractor further represents and warrants that execution of this Contract is within Contractor's legal powers, and each individual executing this Contract on behalf of Contractor is duly authorized by all necessary and appropriate action to do so on behalf of Contractor and does so with full legal authority.

7.2. Solicitation Representations. Contractor represents and warrants that all statements and representations made in Contractor's proposal, bid, or other supporting documents submitted to City of Cooper City in connection with the solicitation, negotiation, or award of this Contract, including during the procurement or evaluation process, were true and correct when made and are true and correct as of the date Contractor executes this Contract, unless otherwise expressly disclosed in writing by Contractor.

7.3. Contingency Fee. Contractor represents that it has not paid or agreed to pay any person or entity, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Contract.

7.4. Public Entity Crimes. Contractor represents that it is familiar with the requirements and prohibitions of the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Contract will not violate that Act. In addition to the foregoing, Contractor further represents that there has been no determination that it committed a "public entity crime" as defined by Section 287.133, Florida Statutes, and that it has not been formally charged with committing an act defined as a "public entity crime," regardless of the amount of money involved or whether Contractor has been placed on the convicted vendor list.

7.5. Discriminatory Vendor and Scrutinized Companies List; Countries of Concern. Contractor represents that it has not been placed on the discriminatory vendor list as provided in Section 287.134, Florida Statutes, and that it is not a "scrutinized company" pursuant to Sections 215.473 or 215.4725, Florida Statutes. Contractor further represents that it is not, and for the duration of the Contract will not be, ineligible to contract with City of Cooper City on any of the grounds stated in Section 287.135, Florida Statutes. Contractor represents that it is, and for the duration of this Contract will remain, in compliance with Section 286.101, Florida Statutes.

7.6. Claims Against Contractor. Contractor represents and warrants that there is no action or proceeding, at law or in equity, before any court, mediator, arbitrator, governmental or other board or official, pending or, to the knowledge of Contractor, threatened against or affecting Contractor, the outcome of which may (a) affect the validity or enforceability of this Contract, (b) materially and adversely affect the authority or ability of Contractor to perform its obligations under this Contract, or (c) have a material and adverse effect on the consolidated financial condition or results of operations of Contractor or on the ability of Contractor to conduct its business as presently conducted or as proposed or contemplated to be conducted.

7.7. Verification of Employment Eligibility. Contractor represents that Contractor and each Subcontractor have registered with and use the E-Verify system maintained by the United States



Department of Homeland Security to verify the work authorization status of all newly hired employees in compliance with the requirements of Section 448.095, Florida Statutes, and that entry into this Contract will not violate that statute. If Contractor violates this section, City of Cooper City may immediately terminate this Contract for cause and Contractor shall be liable for all costs incurred by City of Cooper City due to the termination.

7.8. Warranty of Performance. Contractor represents and warrants that it possesses the knowledge, skill, experience, and financial capability required to perform and provide all Work and that each person and entity that will perform or provide Work is duly qualified to perform such Work by all appropriate governmental authorities, where required, and is sufficiently experienced and skilled in the area(s) for which such person or entity will render such Work. Contractor represents and warrants that the Work shall be performed in a skillful and respectful manner, and that the quality of all such Work shall equal or exceed prevailing industry standards for such Work.

7.9. Truth-In-Negotiation Representation. Contractor's compensation under this Contract is based upon its representations to City, and Contractor certifies that the wage rates, factual unit costs, and other information supplied to substantiate Contractor's compensation, including without limitation those made by Contractor during the negotiation of this Contract, are accurate, complete, and current as of the date Contractor executes this Contract. Contractor's compensation may be reduced by City, in its sole discretion, to correct any inaccurate, incomplete, or noncurrent information provided to City of Cooper City as the basis for Contractor's compensation in this Contract.

7.10. Prohibited Telecommunications Equipment. Contractor represents and certifies that Contractor and all Subcontractors do not use any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, as such terms are used in 48 CFR §§ 52.204-24 through 52.204-26. Contractor represents and certifies that Contractor and all Subcontractors shall not provide or use such covered telecommunications equipment, system, or services at any time during the term of this Contract.

7.11. Criminal History Screening Practices. In addition to any City Code or policy, Contractor represents and certifies that Contractor will also comply with Section 26-125(d) of the Broward County Code for the duration of the Contract.

7.12. Breach of Representations. Contractor acknowledges that City of Cooper City is materially relying on the representations, warranties, and certifications of Contractor stated in this article, and City of Cooper City shall be entitled to exercise any or all of the following remedies if any such representation, warranty, or certification is untrue: (a) recovery of damages incurred; (b) termination of this Contract without any further liability to Contractor; (c) set off from any amounts due Contractor the full amount of any damage incurred; and (d) debarment of Contractor.



ARTICLE 8. MISCELLANEOUS

8.1. Contract Documents and Priority of Provisions. In the event of any conflict between the terms contained in this Contract and those contained in a Contract Supplement, the terms of such Contract Supplement shall prevail. Furthermore, in the event of any conflict between the terms of the General Conditions included in this Contract and those contained in any General Supplemental Provisions, the terms of such General Supplemental Provisions shall prevail. In addition, anything shown on the drawings and not mentioned in the specifications or mentioned in the specifications and not shown on the drawings, shall have the same effect as if shown or mentioned respectively in both. In the event of a conflict among the Contract Documents, Contractor shall provide the latest, most stringent, and more technical requirement(s), including, but not limited to, the requirements setting forth the better quality or greater quantity.

Notwithstanding the forgoing, the following priority of provisions shall apply in the event of a conflict:

| | |
|-------------------|--|
| First Priority: | Approved Change Orders, Addendums, or Amendments |
| Second Priority: | Technical Specifications |
| Third Priority: | Supplemental Conditions or Special Terms |
| Fourth Priority: | General Terms and Conditions |
| Fifth Priority: | Contract |
| Sixth Priority: | Solicitation documents |
| Seventh Priority: | Contractor's response to solicitation documents |

8.2. Independent Contractor. Contractor is an independent contractor under this Contract. Work provided by Contractor pursuant to this Contract shall be subject to the supervision of Contractor. In providing such services, neither Contractor nor its agents shall act as officers, employees, or agents of City. This Contract shall not constitute or make the Parties a partnership or joint venture.

8.3. Third-Party Beneficiaries. Neither Contractor nor City of Cooper City intends to directly or substantially benefit a third party by entering into this Contract. Therefore, the Parties agree that there are no third-party beneficiaries to this Contract (other than Consultant to the extent this Contract expressly provides Consultant with specific rights or remedies).

8.4. Notices. Unless otherwise stated herein, for notice to a Party to be effective under this Contract, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via email, to the addresses listed below and shall be effective upon mailing or hand delivery (provided the contemporaneous email is also sent).



Addresses may be changed by the applicable Party giving notice of such change in accordance with this section.

FOR CITY:

City of Cooper City _____
Attn: _____ Ryan Eggleston, City Manager _____
9090 SW 50th Place
Cooper City, Florida 33328
Email address: _____ reggleston@coopercity.gov _____

With a copy to:

Attn: Jacob Horowitz, City Attorney
3099 East Commercial Boulevard, Suite 200
Fort Lauderdale, Florida 33308
Email address: JHorowitz@gorencherof.com

FOR CONTRACTOR:

Email address: _____

8.5. **Assignment.** Neither this Contract nor any interest herein or proceeds hereof shall be assigned, transferred, or encumbered without the written consent of the other party, and Contractor shall not subcontract any portion of the Work required by this Contract except as authorized by Article 28 of the General Conditions. Any attempted assignment, transfer, encumbrance, or subcontract in violation of this section shall be void and ineffective, and shall constitute a breach of this Contract. City of Cooper City reserves the right to condition its approval of any assignment, transfer, encumbrance, or subcontract upon further due diligence and an additional fee paid to City of Cooper City to reasonably compensate it for the performance of any such due diligence.

8.6. **Materiality and Waiver of Breach.** Each requirement, duty, and obligation set forth in this Contract was bargained for at arm’s-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth herein is substantial and important to the formation of this Contract and is, therefore, a material term.

8.7. **No Waiver.** City’s failure to enforce any provision of this Contract shall not be deemed a waiver of its right or power to enforce such provision or a modification of this Contract. The failure to assert a breach of a provision of this Contract shall not be deemed a waiver of such breach or of any subsequent breach, nor shall it be construed to be a modification of the terms of this Contract.



8.8. Severability. If any part of this Contract is found to be unenforceable by a court of competent jurisdiction, that part shall be deemed severed from this Contract and the balance of this Contract shall remain in full force and effect.

8.9. Law, Jurisdiction, Venue, Waiver of Jury Trial. This Contract shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Jurisdiction of any controversies or legal problems arising out of this Contract, and any action involving the enforcement or interpretation of any rights hereunder, shall be exclusively in the state courts of the Seventeenth Judicial Circuit in Broward County, Florida, and venue for such litigation shall be exclusively in such state courts, forsaking any other jurisdiction that either party may claim by virtue of its residency or other jurisdictional device. **EACH PARTY HEREBY EACH EXPRESSLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS CONTRACT. IF A PARTY FAILS TO WITHDRAW A DEMAND FOR A JURY TRIAL AFTER WRITTEN NOTICE BY THE OTHER PARTY, THE PARTY MAKING THE DEMAND FOR JURY TRIAL SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY TO CONTEST THE DEMAND FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION. CONTRACTOR, PURSUANT TO ARTICLE 28 OF THE GENERAL CONDITIONS, SHALL SPECIFICALLY BIND ALL SUBCONTRACTORS TO THE PROVISIONS OF THIS SECTION.**

8.10. Amendments. Unless otherwise expressly authorized herein, no modification, amendment, or alteration of any portion of this Contract shall be effective unless contained in a written document executed with the same or similar formality as this Contract by duly authorized representatives of City of Cooper City and Contractor.

8.11. Prior Agreements. The Contract is the final and complete understanding of the Parties regarding the subject matter hereof and supersedes all prior and contemporaneous negotiations and discussions regarding that subject matter. All commitments, agreements, and understandings of the Parties concerning the subject matter of this Contract or the Contract Documents are contained herein.

8.12. Compliance with Laws. Contractor and the Work must comply with all Applicable Law, including, but not limited to, the Americans with Disabilities Act, 42 U.S.C. § 12101, Section 504 of the Rehabilitation Act of 1973, and the requirements of any applicable grant agreements.

8.13. **[THIS SUB-ARTICLE IS NOT APPLICABLE TO THIS CONTRACT]** Workforce Investment Program. This Contract constitutes a “Covered Contract” under the Broward Workforce Investment Program, Broward County Administrative Code Section 19.211 (“Workforce Investment Program”). Contractor affirms it is aware of the requirements of the Workforce Investment Program and agrees to use good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal as set forth therein, including by (a) publicly advertising any vacancies that are the direct result of this Contract (whether those vacancies are with Contractor or Subcontractor) exclusively with CareerSource Broward for at least five (5) business days and using good faith efforts to interview any qualified candidates referred under the Workforce



Investment Program, and (b) using good faith efforts to hire Qualifying New Hires, as defined by the Workforce Investment Program, for at least fifty percent (50%) of the vacancies that are the direct result of this Contract. Until at least one year after the conclusion of this Contract, Contractor shall maintain and make available to City of Cooper City upon request all records documenting Contractor's compliance with the requirements of the Workforce Investment Program, and shall submit the required Workforce Investment Reports to the Contract Administrator annually by January 31 and within thirty (30) days after the expiration of termination of this Contract. Failure to demonstrate good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal shall constitute a material breach of this Contract.

8.14. Additional Security Requirements. Contractor certifies and represents that it will comply with the security requirements of the City and as mandated by the Federal and State governments for treatment plant facilities.

8.15. **[THIS SUB-ARTICLE IS NOT APPLICABLE TO THIS CONTRACT]** Federally Funded Contracts. Contractor certifies and represents that it will comply with the Federally Funded Contract Requirements attached hereto as Exhibit __. THIS SUB-SECTION IS NOT APPLICABLE TO THIS CONTRACT

8.16. Drug-Free Workplace. Pursuant to Section 21.23(f), Broward County Administrative Code, or Section 287.087, Florida Statutes, Contractor certifies that it has and will maintain a drug-free workplace program throughout the duration of this Contract.

8.17. Polystyrene Food Service Articles. Contractor shall not sell or provide for use on City property expanded polystyrene products or food service articles (e.g., Styrofoam), unencapsulated expanded polystyrene products, etc.

8.18. Regulatory Capacity. Notwithstanding the fact that City of Cooper City is a political subdivision with certain regulatory authority, City's performance under this Contract is as a Party to this Contract and not in its regulatory capacity. If City of Cooper City exercises its regulatory authority, the exercise of such authority and the enforcement of Applicable Law shall have occurred pursuant to City's regulatory authority as a governmental body separate and apart from this Contract, and shall not be attributable in any manner to City of Cooper City as a party to this Contract.

8.19. **[THIS SUB-ARTICLE IS NOT APPLICABLE TO THIS CONTRACT]** Construction Apprenticeship Program. If this Contract is a construction contract as defined in Section 26-9 of the Code, Contractor represents and certifies that it shall at all times comply with the requirements of the Construction Apprenticeship Program as set forth in Sections 26-8 through 26-11 of the Code.

8.20. Interpretation. The titles and headings in the Contract Documents are for reference purposes only and shall not in any way affect the meaning or interpretation of this Contract. All personal pronouns shall include any other gender, and the singular shall include the plural, and



vice versa, unless the context otherwise requires. Terms such as “herein” refer to the Contract as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article, such reference is to the section or article as a whole, including the subsections thereof, unless the reference is made to a particular subsection or subparagraph of such section or article. Any reference to “days” means calendar days, unless otherwise expressly stated. Any reference to approval by City of Cooper City shall require approval in writing, unless otherwise expressly stated.

8.21. Incorporation by Reference. Any and all Recital clauses stated above are true and correct and are incorporated in this Contract by reference. The attached Exhibits are incorporated into and made a part of this Contract.

8.22. Fiscal Year. The continuation of this Contract beyond the end of any City of Cooper City fiscal year is subject to both the appropriation and the availability of funds pursuant to Chapter 129 and, if applicable, Chapter 212, Florida Statutes.

8.23. Sovereign Immunity. Except to the extent sovereign immunity may be deemed to be waived by entering into this Contract, nothing herein is intended to serve as a waiver of sovereign immunity by City of Cooper City nor shall anything included herein be construed as consent by City of Cooper City to be sued by third parties in any matter arising out of this Contract.

8.24. Counterparts and Multiple Originals. This Contract may be executed in multiple originals, and may be executed in counterparts, whether signed physically or electronically, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

(The remainder of this page is intentionally left blank.)



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

IN WITNESS OF THE FOREGOING, the Parties hereunto set their hands and seals on dates written below.

CITY OF COOPER CITY, a Florida Municipal Corporation

BY: _____
Ryan Eggleston
CITY MANAGER

ATTEST:

BY: _____
CITY CLERK

BY: _____
GREG ROSS
MAYOR

APPROVED AS TO LEGAL FORM:

BY: _____
CITY ATTORNEY

WITNESSED BY: _____

Signature

BY: _____
(Florida Corporation or LLC)

Print Name

Name: _____

Title: _____

STATE OF _____

COUNTY OF _____

BEFORE ME, an officer duly authorized by law to administer oaths and take acknowledgements, personally appeared _____, as _____ of _____, and acknowledged that he has executed the foregoing instrument for the use and purposes mentioned in it and that the instrument is the act and deed of _____,



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

as _____ of _____, and who is personally known to me or has produced _____ as identification.

IN WITNESS WHEREOF, I have set my hand and seal in the State _____ and County aforesaid this _____ day of _____, 20____.

NOTARY PUBLIC

PRINT OR TYPE NAME

My Commission Expires: _____

[END OF PAGE]



CONTRACT SUPPLEMENT [THIS SUPPLEMENT IS NOT APPLICABLE TO THIS CONTRACT]

[DELETE THIS PAGE IF NOT APPLICABLE]

The following deviations are incorporated herein and made a part of this Contract, revising the respective article and section as noted below.

Coding: Words in ~~striketrough~~ type are deletions from existing text. Words in underlined text are additions to existing text.



FORM 1: PERFORMANCE BOND

Project Name: Pump Station #55 Generator Replacement
Project Number: ITB 2023-06-UTL

BY THIS BOND, We _____, as Principal, hereinafter called Contractor, located at _____, with a phone number of _____, and _____, as Surety, located at _____, with a phone number of _____, under the assigned Bond Number _____, are bound to Broward County, Florida, as Obligee, hereinafter called County, located at _____, with a phone number of _____, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Contractor has by written agreement dated the _____ day of _____, 20____, entered into a Contract, Bid/Contract No. _____, with _____ County, the terms of which contract (including the Contract Documents, as those are defined in the contract) are incorporated by reference herein and made a part hereof as the "Contract," which includes any and all provisions for liquidated damages, and other damages identified.

THE CONDITION OF THIS BOND is that if Contractor:

- 1) Performs the Contract between Contractor and City of Cooper City for construction of _____, in the time and manner prescribed in the Contract; and
- 2) Pays City of Cooper City all losses, liquidated damages, expenses, costs and attorneys' fees including appellate proceedings, that City of Cooper City sustains as a result of default by Contractor under the Contract; and
- 3) Performs the guaranties of all Work (as defined in the Contract) and materials furnished under the Contract for the time specified in the Contract, then THIS BOND IS VOID; OTHERWISE IT REMAINS IN FULL FORCE AND EFFECT.

Whenever Contractor shall be, and is declared by City of Cooper City to be, in default under the Contract, with City of Cooper City having performed its obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- a) Complete the required performance in accordance with the terms and conditions of the Contract Documents; or
- b) Obtain a bid or bids for completing the Project in accordance with the terms and conditions of the Contract Documents, and upon determination by Surety of the lowest responsible Bidder, or, if City of Cooper City elects, upon determination by City of Cooper City and Surety jointly of the lowest responsible Bidder, arrange for a contract between such Bidder and City of Cooper City on the same terms and conditions as the Contract Documents unless



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

otherwise agreed by County, and shall make available as Work progresses sufficient funds to pay the cost of completion of the Work required by the Contract in an amount less but not exceeding the balance of the Contract Price, which amount shall include other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by City of Cooper City to Contractor under the Contract and any amendments thereto, less the amount properly paid by City of Cooper City to Contractor.

No right of action shall accrue on this bond to or for the use of any person or corporation other than City of Cooper City named herein.

The Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this Bond.

Signed and sealed this _____ day of _____, 20__.

ATTEST:

CONTRACTOR

Corporate Secretary or other
person authorized to attest

By: _____
Authorized Signer

Print Name

Print Name and Title

_____ day of _____, 20__

(CORPORATE SEAL OR NOTARY)

IN THE PRESENCE OF:

SURETY:

Signature

By _____
Agent and Attorney-in-Fact

(Print Name)

(Print/Type Name)

Signature

Address: _____
(Street)

(City/State/Zip Code)

Telephone No.: _____



FORM 2: PAYMENT BOND

Project Name: Pump Station #55 Generator Replacement
Project Number: ITB 2023-06-UTL

KNOW ALL BY THESE PRESENTS:

That we _____, as Principal (hereinafter called "Contractor"), located at _____, with a phone number of _____, and _____, as Surety, located at _____, with a phone number of _____, under the assigned Bond Number _____ and pursuant to Section 255.05, Florida Statutes, are bound to B City of Cooper City, Florida (hereinafter "City"), as Obligee, located at _____, with a phone number of _____, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Contractor has by written agreement dated the ____ of _____, 20__, entered into a Contract, Bid/Contract No. _____, with City for construction of _____ located at _____, the terms of which contract (including the Contract Documents, as those are defined in the contract) are incorporated by reference herein and made a part hereof as the "Contract."

THE CONDITION OF THIS BOND is that if Contractor:

1. Pays City all losses, damages, expenses, costs and attorneys' fees including appellate proceedings, that City sustains because of default by Contractor under the Contract; and
2. Promptly makes payments to all claimants as defined by Florida Statute Section 255.05(1) for all labor, materials and supplies used directly or indirectly by Contractor in the performance of the Contract;

THEN CONTRACTOR'S OBLIGATION SHALL BE VOID; OTHERWISE, IT SHALL REMAIN IN FULL FORCE AND EFFECT SUBJECT, HOWEVER, TO THE FOLLOWING CONDITIONS:

- A. A claimant, except a laborer, who is not in privity with Contractor and who has not received payment for its labor, materials, or supplies shall, within forty-five (45) days after beginning to furnish labor, materials, or supplies for the prosecution of the Work (as defined in the Contract), furnish to Contractor a notice that he or she intends to look to the bond for protection.
- B. A claimant who is not in privity with Contractor and who has not received payment for its labor, materials, or supplies shall, within ninety (90) days after performance of the labor or after complete delivery of the materials or supplies, deliver to Contractor and to the Surety, written



notice of the performance of the labor or delivery of the materials or supplies and of the nonpayment.

C. No action for the labor, materials, or supplies may be instituted against Contractor or the Surety unless the notices stated under the preceding conditions (A) and/or (B), as applicable, have been given.

D. Any action under this Bond must be instituted in accordance with the Notice and Time Limitations provisions prescribed in Sections 255.05(2) and 255.05(10), Florida Statutes.

The Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect the Surety's obligation under this Bond.

Signed and sealed this _____ day of _____, 20__.

ATTEST:

CONTRACTOR

By: _____

Corporate Secretary or other
person authorized to attest

Authorized Signer

Print Name

Print Name and Title

_____ day of _____, 20__

(CORPORATE SEAL OR NOTARY)

IN THE PRESENCE OF:

SURETY:

By _____

Signature

Agent and Attorney-in-Fact

(Print Name)

(Print/Type Name)

Address: _____

Signature

(Street)

(City/State/Zip Code)

(Print Name)

Telephone No.: _____



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement



FORM 4: FORM OF CERTIFICATE AND AFFIDAVIT FOR BONDS \$500,000.00 OR LESS

TO: CITY OF COOPER CITY
RE: BID NUMBER: _____

BIDDER: _____

Name: _____

Address: _____

Phone: _____

AMOUNT OF BOND: _____

SURETY BOND COMPANY:

Name: _____

Address: _____

Phone: _____

This is to certify that, in accordance with Section 287.0935, Florida Statutes, the insurer named above:

- (1) Is licensed to do business in the State of Florida;
- (2) Holds a certificate of authority authorizing it to write surety bonds in the State of Florida;
- (3) Has twice the minimum surplus and capital required by the Florida Insurance Code;
- (4) Is otherwise in compliance with the provisions of the Florida Insurance Code; and
- (5) Currently holds a valid certificate of authority issued by the United States Department of Treasury under 31 U.S.C. §§ 9304-9308.

(Date Signed)

Agent and Attorney-in-Fact

(continued on next page)



**FORM 5: UNCONDITIONAL LETTER OF CREDIT
(PERFORMANCE AND PAYMENT GUARANTY) FORM**

UNCONDITIONAL LETTER OF CREDIT

Beneficiary:

City of Cooper City,
9090 SW 50th Place
Cooper City, FL 33328

Date of Issue _____

Issuing Bank's No. _____

Applicant: _____

Amount: _____

(in United States Funds)

Expiry: _____

(Date)

Bid/Contract Number _____

We hereby authorize you to draw on (Bank, Issuer Name) at (Branch Address) by order of and for the account of (Contractor, Applicant, Customer) up to an aggregate amount, in United States Funds, of \$(Dollar Amount) available by your drafts at sight, accompanied by: A signed statement from the City Manager of City of Cooper City, or the City Manager's authorized representative that the drawing is due to default in performance of certain obligations on the part of (Contractor, Applicant, Customer) agreed upon by and between City of Cooper City and (Contractor, Applicant, Customer) pursuant to the Bid/Contract No. for (Name of Project) and Section 255.05, Florida Statutes. Drafts must be drawn and negotiated not later than (expiration date). Drafts must bear the clause: "Drawn under Letter of Credit No. (number), of (Bank Name) dated _____."

This Letter of Credit shall be renewed for successive periods of one (1) year each unless we provide the City Manager of Cooper City with written notice of our intent to terminate the credit herein extended, which notice must be provided at least thirty (30) days prior to the expiration date of the original term hereof or any renewed one (1) year term. Notification to City of Cooper City that this Letter of Credit will expire prior to performance of Contractor's obligations will be deemed a default.

This Letter of Credit sets forth in full the terms of our undertaking, and such undertaking shall not in any way be modified or amplified by reference to any documents, instrument, or agreement referred to herein or in which this Letter of Credit is referred to or this Letter of Credit relates, and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement.

We hereby agree with the drawers, endorsers, and bona fide holders of all drafts drawn under and in compliance with the terms of this Letter of Credit that such drafts will be duly honored upon presentation to the drawee.

Obligations under this Letter of Credit shall be released one (1) year after the final completion of the Project by the _____ (Contractor, Applicant, Customer).



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

This Credit is subject to the “Uniform Customs and Practice for Documentary Credits,” International Chamber of Commerce (2007 revision), Publication No. 600 and to the provisions of Florida law. If a conflict between the Uniform Customs and Practice for Documentary Credits and Florida law should arise, Florida law shall prevail. If a conflict between the law of another state or country and Florida law should arise, Florida law shall prevail.

Authorized Signature



FORM 7: FINAL (CBE/SBE) UTILIZATION REPORT
[THIS FORM IS NOT APPLICABLE TO THIS PROJECT]

Report No. _____



FINAL (CBE) UTILIZATION REPORT

| | | | |
|-----------------------------|-------------------------|---------------------------------|----------------------------|
| Contract #: | Contract Amount: | Date Form Submitted: | |
| Project Description: | | | |
| Prime Contractor: | | Project Completion Date: | Amt. Paid to Prime: |
| Contact Person: | | Period Ending: | Fax#: () |
| | | Telephone#: () | |

SUBCONTRACTING INFORMATION

TO BE SUBMITTED TO BROWARD COUNTY OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT

| CBE Subcontractor | Address | Description of Work | Original Agreed Price | Revised Agreed Price | % of work Completed to Date | Amount Paid This Period | Amount Paid To Date |
|---|---------|---------------------|-----------------------|----------------------|-----------------------------|-------------------------|---------------------|
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| Total Amount Paid to Subcontractors to Date: | | | | | | | |

I certify that the information submitted in this report is in fact true and correct to the best of my knowledge

| | |
|-------------------|--------------|
| Signature: | Date: |
| | |

Note: The information provided herein is subject to verification by the Office of Economic and Small Business Development.

OESBD Compliance Form 2009-MUR-F



City of Cooper City, Florida
ITB 2023-06-UTL, Pump Station #55 Generator Replacement

Contractor

By

Date

City of Cooper City, through the Contract Administrator, has determined the Work or portion thereof designated by City of Cooper City is substantially complete and will assume full possession thereof at (time) _____ on _____ (date) _____.

CITY OF COOPER CITY:

By Contract Administrator

Date

The responsibilities of City of Cooper City and Contractor for security, maintenance, heat, utilities, damage to the work and insurance shall be as follows: _____



FORM 12: FORM OF FINAL RECEIPT

[The following form will be used to show receipt of final payment for this Contract.]

FINAL RECEIPT FOR CONTRACT NO. _____

Received this _____ day of _____, 20____, from City of Cooper City, the sum of _____ Dollars (\$_____) as full and final payment to Contractor for all Work and materials for the Project described as:

This sum includes full and final payment for all extra Work and material and all incidentals.

Contractor hereby indemnifies and releases City of Cooper City from all liens and claims whatsoever arising out of the Contract and/or Project.

Contractor hereby certifies that all persons doing Work upon or furnishing materials or supplies for the Project have been paid in full. In lieu of this certification regarding payment for Work, materials and supplies, Contractor may submit a consent of surety to final payment in a form satisfactory to City.

Contractor further certifies that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act), as amended, have been paid and discharged.

[IF INCORPORATED SIGN BELOW.]

CONTRACTOR

ATTEST:

CONTRACTOR NAME

Corporate Secretary or other
person authorized to attest

By: _____
Authorized Signer

(CORPORATE SEAL OR NOTARY)

Print Name and Title

_____ day of _____, 20____



[IF NOT INCORPORATED SIGN BELOW.]

CONTRACTOR

WITNESSES:

Witness signature

Business Name

Print/Type Name

By: _____
Authorized Signer

Witness signature

Print/Type Name and Title

Print/Type Name

_____ day of _____, 20__



FORM 13: FINAL LIST OF NON-CERTIFIED SUBCONTRACTORS AND SUPPLIERS
[THIS FORM IS NOT APPLICABLE TO THIS PROJECT]

To: _____, Contractor
From: City of Cooper City Purchasing Division
Subject: Final List of Non-certified Subcontractors/Sub-vendors
Re: _____
(Project Title, Contract Number)

The attached list of non-certified Subcontractors/sub-vendors have performed or provided services to City of Cooper City for the referenced contract. Non-certified Subcontractors/sub-vendors are any Subcontractors/sub-vendors whose services under the Contract were not approved to meet the City’s participation CBE/SBE goal established for this Contract, and whose participation was not listed on Contractor’s “Schedule of Participation” and/or not approved as substitutes or additions by the Broward County Office of Economic Small Business Development Division toward meeting the established goal.

Contractor certifies the following:

- There were no other non-certified Subcontractors/sub-vendors who provided a service to City of Cooper City for the referenced Contract. All participants on the Contract are listed on the attached list.
- There were other non-certified Subcontractors/sub-vendors who provided a service and are not listed on the attached list. The additional Subcontractors/sub-vendors are listed on the attached list.

THE UNDERSIGNED VENDOR HEREBY CERTIFIES THAT THE INFORMATION PROVIDED HEREIN IS TRUE AND CORRECT.

The foregoing instrument was acknowledged before me, by means of physical presence or online notarization, this _____ day of _____, 20____, by _____, who is personally known to me or who has produced _____ as identification and (who did (did not)) take an oath.

NOTARY PUBLIC:

Signature: _____

Print Name: _____

(NOTARY SEAL)

My commission expires:



FORM 14: LETTER OF INTENT (CBE/SBE)
To Utilize a County Business Enterprise (CBE) or Small Business Enterprise (SBE)
Subcontractor/Subconsultant

[THIS FORM IS NOT APPLICABLE TO THIS PROJECT]

Project Name: «Project_Name»
Project Number: «Project_Number»

From (Name of Proposer/Bidder): _____

Firm Address: _____

Project Description: _____

In response to City of Cooper City's RFP/Bid No. _____, the undersigned hereby agree to utilize the CBE or SBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with City of Cooper City.

Name of CBE/SBE Firm: _____

Address of CBE/SBE Firm: _____

Expiration of CBE/SBE Certification: _____ Projected CBE/SBE Work Assignment (description of work assignment): _____

Projected Percentage of Prime's Contract Fees to be Awarded to CBE/SBE (Percentage %): _____

(Signature of Owner or Authorized Rep. **Prime**)

(Date)

Print Name (owner or authorized Rep. **Prime**): _____

The foregoing instrument was acknowledged before me, by means of physical presence or online notarization, this _____ day of _____, 20__, by _____, who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

NOTARY PUBLIC:

Signature: _____

Print Name: _____

(NOTARY SEAL)

My commission expires:



(ACKNOWLEDGEMENT BY THE PROPOSED CBE/SBE FIRM)

The undersigned intends to perform Work in connection with the above Contract as (check one):
 an individual a partnership a corporation a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

(Signature of Owner or Authorized Rep. **CBE/SBE**) (Date)

Print Name (owner or authorized Rep. **CBE/SBE**): _____

The foregoing instrument was acknowledged before me, by means of physical presence or online notarization, this _____ day of _____, 20____, by _____, who is personally known to me or who has produced _____ as identification and [who did (did not)] take an oath.

NOTARY PUBLIC:

Signature: _____

Print Name: _____

(NOTARY SEAL)

My commission expires:

[END OF SECTION]

PUMP STATION #55 GENERATOR REPLACEMENT

COOPER CITY, FLORIDA

BID SET

DATE OF ISSUE: 10/27/2023



CITY OF COPPER CITY / UTILITY DEPARTMENT
 11791 SW 49 STREET
 COOPER CITY, FL 33330
 Phone: 954.434.4300

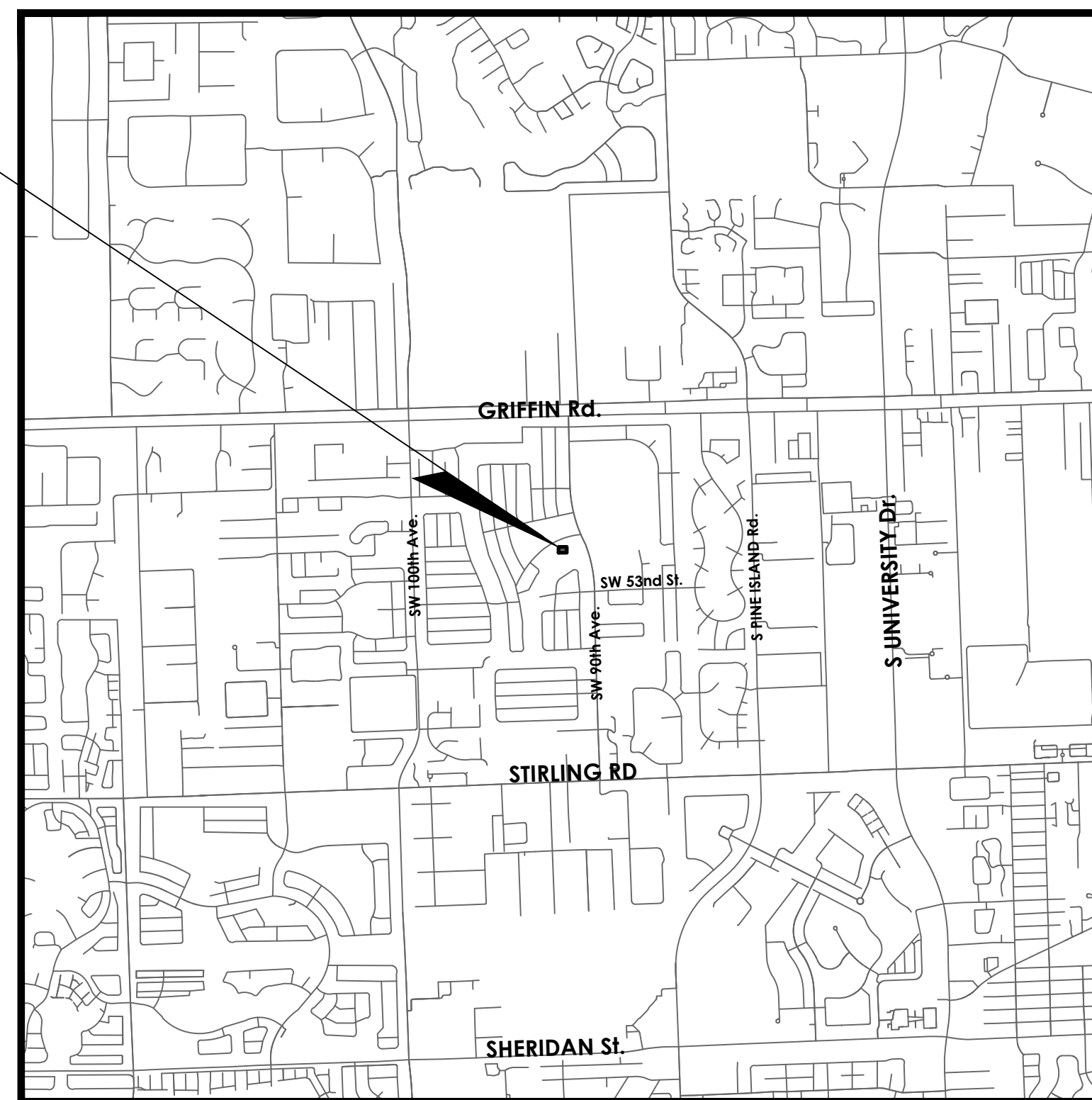
AGENCY COMMISSION/COUNCIL

| | |
|-------------------------|---------------------------------|
| GREG ROSS | MAYOR |
| JEFF GREEN | COMMISSIONER, DISTRICT 3 |
| JEREMY KATZMAN | COMMISSIONER, DISTRICT 1 |
| LISA MALLOZZI | COMMISSIONER, DISTRICT 2 |
| RYAN C. SHROUDER | COMMISSIONER, DISTRICT 4 |

ADMINISTRATION/STAFF

| | |
|-----------------------|---------------------------------------|
| RYAN EGGLESTON | CITY MANAGER |
| CARLOS VEGA | COMMUNITY DEVELOPMENT DIRECTOR |
| RAJ VERMA | UTILITY DIRECTOR/CITY ENGINEER |

PROJECT LOCATION



SECTION 50S, TOWNSHIP 41E, RANGE 32

LOCATION MAP

N.T.S

Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
 Check positive response codes before you dig!

INDEX OF DRAWINGS

| SHT # | DWG # | SHEET TITLE |
|---------|---------------|--|
| 01 | COV-1 | COVER SHEET |
| 02 - 03 | GN-1 - GN-2 | GENERAL NOTES AND DETAILS |
| 04 | EC-1 | EXISTING CONDITION AND DEMOLITION PLAN |
| 05 | C-1 | CIVIL ENGINEERING PLAN |
| 06 - 07 | DET-1 - DET-2 | DETAILS |
| 08-12 | E-1 - E-4 | ELECTRICAL PLAN |



500 West Cypress Creek Road,
 Suite 630
 Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

REGISTRATION

PROJECT NUMBER
 22-0016.00006

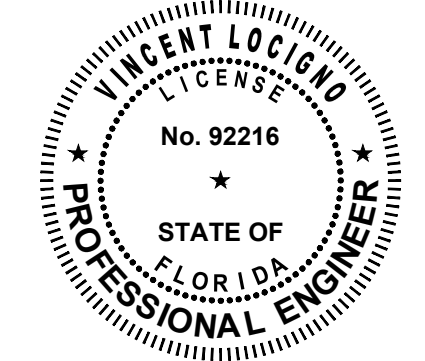
CLIENT PROJECT NUMBER

DRAWING NUMBER

COV-1

01 OF 06

REGISTRATION
 VINCENT LOCIGNO, PE
 REGISTRATION NO. 92216
 DATE: 10/4/2023



This seal is only valid on printed copies that are dated with an original of the licensee's signature. Scanned or electronic copies are not considered signed and sealed.

CLIENT



PROJECT INFORMATION

**PUMP STATION #55
 GENERATOR
 REPLACEMENT**

COOPER CITY,
 FLORIDA

PROJECT NUMBER
 22-0016.00006

CLIENT PROJECT NUMBER

VERIFY SCALES
 0 1"
 IF NOT ONE INCH ON THIS SHEET,
 ADJUST SCALES ACCORDINGLY

REVISIONS

DATE OF ISSUE
 10/27/2023

DESIGNED BY
 VL

DRAWN BY
 JT

CHECKED BY
 DD

DRAWING TITLE

GENERAL NOTES

DRAWING NUMBER
GN-1
 02 OF 06

ABBREVIATIONS

ABN - ABANDONED
 ACP - ASBESTOS CEMENT PIPE
 ARV - AIR RELEASE VALVE
 ASPH - ASPHALT
 BE - BURIED ELECTRIC
 BFO - BURIED FIBER OPTICS
 BFP - BACKFLOW PREVENTER
 BH - BORE HOLE
 BL - BASE LINE
 BOC - BOTTOM OF CURB
 BOP - BOTTOM OF PIPE
 BOS - BOTTOM OF STRUCTURE
 BT - BURIED TELEPHONE
 BTV - BURIED CABLE TELEVISION
 BW - BOTH WAYS
 CATV - CABLE TELEVISION
 CB - CATCH BASIN
 CC - CENTER TO CENTER
 CHW - CHILLED WATER
 CIP - CAST IRON PIPE
 CL - CENTER LINE
 CLF - CHAIN LINK FENCE
 CMP - CORRUGATED METAL PIPE
 CO - CLEAN OUT
 COMM - COMMUNICATIONS
 CONC - CONCRETE
 CONST - CONSTRUCT
 CORP - CORPORATION
 CS - CONTROL STRUCTURE
 A - DELTA ANGLE
 DDCV - DETECTOR DOUBLE CHECK VALVE
 DE - DRAINAGE EASEMENT
 DIP - DUCTILE IRON PIPE
 DS - DOMESTIC SERVICE
 DWY - DRIVEWAY
 E - EAST
 EL - ELEVATION
 ELEC - ELECTRIC
 EOP - EDGE OF PAVEMENT
 EX - EXISTING
 FDC - FIRE DEPARTMENT CONNECTION
 FF - FINISHED FLOOR
 FH - FIRE HYDRANT
 FLG - FLANGE
 FM - FORCE MAIN
 FVO - FLUSHING VALVE OUTLET
 G - GAS
 GA - GAUGE
 GALV - GALVANIZED
 GV - GATE VALVE
 HDPE - HIGH-DENSITY POLYETHYLENE
 HP - HIGH POINT
 INV - INVERT
 IRR - IRRIGATION
 L - ARC LENGTH
 LAT - LATERAL
 LBR - LIMEROCK BEARING RATIO
 LE - LANDSCAPE EASEMENT
 LF - LINEAR FOOT
 LP - LIGHT POLE
 LPFM - LOW PRESSURE FORCE MAIN
 LT - LEFT

ABBREVIATIONS

MAX - MAXIMUM
 MB - MAIL BOX
 MH - MANHOLE
 MIN - MINIMUM
 MJ - MECHANICAL JOINT
 MTR - METER
 N - NORTH
 NAVD - NORTH AMERICAN VERTICAL DATUM
 NGVD - NATIONAL GEODETIC VERTICAL DATUM
 NIC - NOT IN CONTRACT
 NO - NUMBER
 NPW - NON-POTABLE WATER
 NTS - NOT TO SCALE
 OHW - OVERHEAD WIRE
 OC - ON CENTER
 OE - OVERHEAD ELECTRIC
 OFO - OVERHEAD FIBER OPTICS
 OR - OFFICIAL RECORDS
 OT - OVERHEAD TELEPHONE
 OTV - OVERHEAD CABLE TELEVISION
 PB - PLAT BOOK
 PC - POINT OF CURVATURE
 PE - POLYETHYLENE
 PET - PETROLEUM OIL
 PG - PAGE
 PI - POINT OF INTERSECTION
 PL - PROPERTY LINE
 PRB - POLLUTION RETARDANT BAFFLE
 PRM - PERMANENT REFERENCE MONUMENT
 PROP - PROPOSED
 PSI - POUNDS PER SQUARE INCH
 PT - POINT OF TANGENCY
 PVC - POLYVINYL CHLORIDE
 PVMT - PAVEMENT
 R - RADIUS
 R/W - RIGHT-OF-WAY
 RCP - REINFORCED CONCRETE PIPE
 REST - RESTRAINED
 RPM - REFLECTIVE PAVEMENT MARKER
 RT - RIGHT
 S - SOUTH
 SAN - SANITARY SEWER
 SD - STORM DRAIN
 SH - SHORT
 SHT - SHEET
 SLV - SLEEVE
 STA - STATION
 STL - STEEL
 TEL - TELEPHONE
 TFO - TAPPING FLANGED OUTLET
 TOC - TOP OF CURB
 TOP - TOP OF PIPE
 TYP - TYPICAL
 UE - UTILITY EASEMENT
 UNK - UNKNOWN
 VCP - VITRIFIED CLAY PIPE
 W - WEST
 W/O - WITHOUT
 W/R - WHITE & RED
 WM - WATER MAIN
 WTR - WATER
 YY - YELLOW & YELLOW

LEGEND

DEMOLITION

 REMOVE MATERIAL FROM AREA
 RESTORATION AREA
 REMOVE ITEM

OTHER UTILITIES

 EX BE - EXISTING BURIED ELECTRIC

COORDINATE GEOMETRY

 LOT OR PROPERTY LINE

FORCE MAIN COLLECTION / TRANSMISSION

 FM - FORCE MAIN
 EXISTING FORCE MAIN

VERTICAL DATUM INFORMATION
 ALL ELEVATIONS SHOWN ARE IN NORTH
 AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
 CONVERSION FACTOR:
 NAVD88 + 1.60 = NGVD29 IN THIS AREA

Sunshine 811
 Call 811 or www.sunshine811.com two full
 business days before digging to have utilities
 located and marked.
 Check positive response codes before you dig!

CIVIL ENGINEERING PLAN NOTES:

- REFER TO STRUCTURAL PLANS FOR SLAB SECTION & DETAILS.
- CONTRACTOR TO GRADE AWAY AND AROUND THE NEW SLAB TO PREVENT PONDING.
- THIS SITE IS IN THE FEMA FLOOD DESIGNATED AREA X (0.2 PCT ANNUAL CHANCE FLOOD HAZARD) PANEL 12011C0545H.
- THIS PLAN WAS NOT BASED ON A SURVEY.
- REFER TO ELECTRICAL PLANS FOR RELOCATION OF ELECTRICAL LINES

GENERAL STRUCTURAL PLAN NOTES:

- THESE NOTES ARE GENERAL AND SUPPLEMENT THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
- DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE FLORIDA BUILDING CODE.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK.
- EQUIPMENT ANCHOR BOLT SIZES, TYPES, EMBEDMENT AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATE TO INSURE ACCURACY OF PLACEMENT.
- IF CONTRACTOR DESIRES TO TEMPORARILY PLACE OR MOVE LOADS ON OR ADJACENT TO EXISTING STRUCTURES OR UTILITIES DURING CONSTRUCTION PROCESS, CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR MARINATING STRUCTURAL INTEGRITY AND AVOIDING OVERSTRESSING AND DAMAGING EXISTING STRUCTURES AND UTILITIES.
- DESIGN OF CONCRETE ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318 (CODE REQUIREMENTS FOR STRUCTURAL CONCRETE) AND 350 (CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
- CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
- ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.
- CONCRETE COVER FOR REINFORCING:
 - CONCRETE DEPOSITED DIRECTLY AGAINST SOIL: 3"
 - CONCRETE EXPOSED TO WEATHER (#5 OR SMALLER): 1 1/2"
- SPLICES SHALL BE CLASS "B" CONFORMING TO THE PROVISIONS OF ACI 318 UNLESS NOTED OTHERWISE.
- ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER OR A 1/2" RADIUS TOOLED CORNER.
- CONDUITS AND OTHER SIMILAR ITEMS EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2" CLEAR. WHEN SUCH ITEMS ARE EMBEDDED IN WALLS OR SLABS, THEY SHALL NOT OCCUPY MORE THAN 1/3 OF THE MEMBER THICKNESS.
- CLEAR DISTANCE FROM ANCHOR BOLTS TO ANY CONCRETE EDGE SHALL BE 4" MINIMUM UNLESS NOTED OTHERWISE.
- CONTRACTOR WILL BE RESPONSIBLE FOR CONCRETE COMPRESSIVE STRENGTH TEST.

EXISTING CONDITIONS NOTES:

- CONTRACTOR IS TO PROTECT ALL EXISTING TREES, SIGNS, AND UTILITIES NOT IMPACTED BY THIS PLAN.
- THIS PROPERTY IS LOCATED IN FLOOD ZONE WITH 0.2 PCT ANNUAL CHANCE FLOOD HAZARD, EFFECTIVE DATE AUGUST 18, 2014, PANEL No. 120110545H, EFF 8/18/2014.

GENERAL NOTES:

- MASTER LIFT STATION #55 IS LOCATED AT 9070 SW 51ST Street, Cooper City, FL 33328. ACCESS IS RESTRICTED AND SHALL BE COORDINATED WITH THE OWNER.
- CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, WHETHER SHOWN OR NOT, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON FIELD OBSERVATION AND/OR AVAILABLE PLANS. THE EXACT LOCATION MAY VARY. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD.
- ANY EXISTING ITEM DISTURBED DURING CONSTRUCTION IS TO BE RESTORED TO EQUAL OR BETTER QUALITY.
- GROUND RESTORATION IS TO MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO TAKE THE NECESSARY PRECAUTIONS TO ENSURE PROPER SAFETY AND WORKMANSHIP WHEN WORKING IN THE VICINITY OF EXISTING UTILITY LINES.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH FPL ON ANY WORK IN THE VICINITY OF OVERHEAD OR UNDERGROUND POWER LINES.
- CONTRACTOR SHALL VERIFY PROPER CLEARANCE BELOW EXISTING OVERHEAD POWER LINES PRIOR TO WORKING WITHIN THE VICINITY OF POWER LINES.
- PUMP STATION WITH STANDBY POWER SUPPLY SHALL REMAIN IN SERVICE AT ALL TIMES.
- CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FROM THE APPROPRIATE AUTHORITIES, DEPARTMENTS, AND/OR AGENCIES HAVING JURISDICTION PRIOR TO COMMENCING WORK.
- UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEY INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE TO THEM. THE CONTRACTOR SHALL CONTACT SUNSHINE 811 AT PHONE NUMBER 811 OR 1-800-432-4770 TO REQUEST UNDERGROUND UTILITY LOCATION MARK-OUT AT LEAST TWO (2) WORKING DAYS BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO BEGINNING EXCAVATION, INCLUDING SOIL DRILLING. THE CONTRACTOR SHALL ALSO CONTACT AND REQUEST UTILITY LOCATION MARK-OUT FROM BURIED UTILITY OWNERS WITH UTILITIES ON THE PROJECT SITE THAT ARE NOT PARTICIPANTS OF SUNSHINE 811.

DEMOLITION NOTES:

- DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.
- BEFORE PROCEEDING WITH DEMOLITION OPERATIONS THE CONTRACTOR IS TO DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS.
- CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
- DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR IN-USE FACILITIES WITHOUT PERMISSION FROM OWNER, THE TRIBE AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS AS REQUIRED BY GOVERNING REGULATIONS.
- CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA.
- ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, BARRIERS, RAILINGS, ETC. WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
- ADJACENT IMPROVEMENTS SHALL BE CLEANED OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
- FOR SELECTIVE DEMOLITION, USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN.
- DEMOLISH CONCRETE IN SMALL SECTIONS. CUT CONCRETE AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN MASONRY SAW OR HAND TOOLS; DO NOT USE POWER-DRIVEN IMPACT TOOLS.
- INFORMATION SHOWN ON THE DRAWINGS AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER; HOWEVER, THIS INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION, CHARACTER, AND DEPTH OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSIST THE UTILITY COMPANIES, BY EVERY MEANS POSSIBLE, TO DETERMINE SAID LOCATIONS AND THE LOCATIONS OF RECENT ADDITIONS TO THE SYSTEMS NOT SHOWN.
- REMOVAL, DEMOLITION, HAULING, AND DISPOSAL SHALL COMPLY WITH REGULATIONS BY F.D.E.P., E.P.A., AND ANY OTHER AUTHORITY HAVING JURISDICTION.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL EXISTING PATHWAY AND STREET LIGHTING WILL REMAIN IN PLACE AND REMAIN IN SERVICE DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL USE CARE TO ENSURE EXISTING.

Plot Date: 10/4/2023 8:31:21 AM Username: JTammo Layout Name: GN-2 Filename: 22-0016.00006 General Notes and Details.dwg
Folder Path: V:\Projects\2022\22-0016.00006 - Generator Replacement Lift Station 55\Design\CAD\Sheets

I. GENERAL NOTES

- CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
- CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FROM THE APPROPRIATE AUTHORITIES, DEPARTMENTS, AND/OR AGENCIES HAVING JURISDICTION PRIOR TO COMMENCING WORK.
- ALL PRACTICAL AND NECESSARY EFFORTS SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT UNNECESSARY TREE REMOVAL AND/OR DAMAGE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE TO THEM. THE CONTRACTOR SHALL CONTACT SUNSHINE 811 AT PHONE NUMBER 811 OR 1-800-432-4770 TO REQUEST UNDERGROUND UTILITY LOCATION MARK-OUT AT LEAST TWO (2) WORKING DAYS BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO BEGINNING EXCAVATION, INCLUDING SOIL DRILLING. THE CONTRACTOR SHALL ALSO CONTACT AND REQUEST UTILITY LOCATION MARK-OUT FROM BURIED UTILITY OWNERS WITH UTILITIES ON THE PROJECT SITE THAT ARE NOT PARTICIPANTS OF SUNSHINE 811.
- CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE TO EXISTING PAVEMENT, STRUCTURES, AND UTILITIES THAT ARE NOT INDICATED TO BE DEMOLISHED OR REMOVED. ANY DAMAGE TO EXISTING PAVEMENT, STRUCTURES, AND UTILITIES NOT INDICATED TO BE DEMOLISHED OR REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- DURING EXCAVATION AND PLACEMENT OF UTILITIES THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL SHEET PILING, SHORING AND/OR BRACING DESIGNS AS MAY BE NECESSARY TO COMPLY WITH THESE REGULATIONS.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS GENERATED DURING THE PROJECT OFF SITE AT A PROPERLY PERMITTED DISPOSAL FACILITY.
- THE CONTRACTOR IS REQUIRED TO OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ANY DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS.
- THE UNDERGROUND CONTRACTOR SHALL MINIMIZE THE WORK AREA AND WIDTH OF TRENCHES TO AVOID DISTURBANCES OF NATURAL VEGETATION. SPOIL FROM TRENCHES SHALL BE PLACED ONLY ON PREVIOUSLY CLEARED AREAS, EXISTING RIGHT-OF-WAY OR APPROVED EASEMENT.
- ALL RESTORATION SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE RIGHT-OF-WAY WHERE THE PROJECT IS CONSTRUCTED.
- NO CONNECTIONS FOR THE PURPOSE OF OBTAINING WATER SUPPLY DURING CONSTRUCTION SHALL BE MADE TO ANY FIRE HYDRANT OR BLOW-OFF STRUCTURE WITHOUT FIRST OBTAINING PERMISSION AND A CONSTRUCTION METER FROM THE OWNER.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITIES DEPARTMENT OF THE CITY OF COOPER CITY AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO COORDINATE ANY ACTIVITY TO BE PERFORMED BY THE CITY'S UTILITIES DEPARTMENT.
- CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY AND STATE REGULATIONS PERTAINING TO THE CLOSING OF PUBLIC STREETS FOR USE OF TRAFFIC DURING CONSTRUCTION.
- ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS SHALL NOT BE LEFT OPEN DURING NIGHT TIME HOURS WITHOUT ADEQUATE PROTECTION.
- CONTRACTOR SHALL PROMPTLY REPAIR AND RESTORE EXISTING PAVEMENT, SIDEWALKS, CURBS, DRIVEWAYS, PIPES, RESIDENTIAL AND COMMERCIAL SPRINKLER LINES, CONDUIT, CABLES, ETC. AND LANDSCAPE AREAS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND HOLES, PULL BOXES, INLETS AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAYED WITH ASPHALT.
- THE CONTRACTOR SHALL SUBMIT ALL REQUIRED SHOP DRAWINGS FOR CITY APPROVAL PRIOR TO ORDERING MATERIALS AND INSTALLATION.
- CONTRACTOR SHALL RESTORE EXISTING PAVEMENT AND PAVEMENT MARKINGS/SIGNAGE TO ORIGINAL PRE-CONSTRUCTION CONDITION OR AS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS. THIS WORK SHALL BE CONSIDERED INCIDENTAL.

II. GENERAL PIPELINE NOTES:

- ALL MATERIALS, INSTALLATION, TESTING AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF COOPER CITY, PERMITTING AGENCIES, AND THE TECHNICAL SPECIFICATIONS (WHEN APPLICABLE), WHERE DISCREPANCIES, OMISSIONS OR MODIFICATIONS EXIST BETWEEN THE PLANS, THE SPECIFICATIONS AND THE STANDARDS, THE MORE STRINGENT SHALL GOVERN.
- LOCATION OF EXISTING UNDERGROUND UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY LOCATION AND DEPTH OF ALL PERTINENT UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
- DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO ANSI A21.51/AWWA C151-09 WITH WALL THICKNESS CLASS 50 FOR 8" AND ABOVE, CLASS 52 FOR 4" AND 6" AND SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI A21.4/AWWA C104-03. EPOXY LININGS SHALL BE USED FOR FORCE MAINS. PIPE, FITTINGS AND APPURTENANCES IN METER VAULTS SHALL BE FLANGED. ALL FLANGED DUCTILE IRON PIPE SHALL BE CLASS 53. ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE V-BIO ENHANCED POLYETHYLENE ENCASEMENT. P.V.C. NON-PRESSURE PIPE (GRAVITY SEWER PIPE) 6" TO 15" UP TO 12' DEPTH SHALL CONFORM TO ASTM D3034 WITH A MINIMUM WALL THICKNESS OF SDR 26. NON-PRESSURE PIPE (GRAVITY SEWER) OF DIAMETER GREATER THAN 15" OR OF DEPTH GREATER THAN 12' SHALL CONFORM TO ASTM D3034 WITH A MINIMUM WALL THICKNESS OF SDR 18. PVC PRESSURE PIPE 4" THROUGH 12" SHALL CONFORM TO ANSI A21.51/AWWA C900-07 WITH A MINIMUM WALL THICKNESS OF SDR 18. PVC PRESSURE PIPE 14" THROUGH 48" SHALL CONFORM TO ANSI/AWWA C905-10 WITH A MINIMUM WALL THICKNESS OF SDR 18. POLYETHYLENE PIPE AND FITTINGS SHALL CONFORM TO ANSI A21.51/AWWA C906-07 WITH A MINIMUM WALL THICKNESS OF SDR 26.
- MINIMUM COVER FOR DUCTILE IRON PIPE SHALL BE 30" OR 36", WHERE SPECIFIED (SEE NOTE 9). MINIMUM COVER FOR P.V.C. PIPE IS 36".
- ALL PRESSURE MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR A MINIMUM PERIOD OF 2 HOURS AT 150 PSI WITH AN ALLOWABLE LEAKAGE NOT TO EXCEED THE FORMULA,
$$L = (S \times D \times P1/2) / 148,000$$

IN WHICH
L - EQUALS ALLOWABLE LEAKAGE IN GALLONS/HOUR,
S - EQUALS LENGTH OF PIPE IN FEET,

D - EQUALS NOMINAL DIAMETER OF PIPE IN INCHES,

P - EQUALS AVERAGE TEST PRESSURE DURING TEST IN LBS/SQ. IN.

ALL TESTING SHALL BE MADE IN ACCORDANCE WITH ANSI/AWWA C600-05 (HYDROSTATIC TESTS), C600-10 (DIP PIPE), C605-13 (PVC PIPE) AND C651-05 (WATER MAIN AND BACTERIOLOGICAL TESTS).

- ALL PIPE AND FITTINGS SHALL BE COLOR CODED OR MARKED IN ACCORDANCE WITH RULE 62-865.320 (21) (b) (3), F.A.C. USING BLUE AS THE PREDOMINANT COLOR FOR POTABLE WATER AND GREEN AS THE PREDOMINANT COLOR FOR WASTEWATER (SANITARY SEWER).
- COMPLETE "AS-BUILT" INFORMATION RELATIVE TO MAINTENANCE ACCESS STRUCTURES, VALVES, FITTINGS, LENGTH OF PIPE AND THE LIKE, SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL ELEVATIONS SHALL BE TAKEN BY AN INDEPENDENT REGISTERED SURVEYOR AND INCLUDED IN THE "AS-BUILT" INFORMATION FURNISHED BY THE CONTRACTOR. FINAL APPROVAL OF THE PROJECT IS SUBJECT TO THE FINAL REVIEW AND APPROVAL OF THE "AS-BUILT" INFORMATION FURNISHED TO THE REGULATORY AGENCIES, AND BCWWS.
- ALL MECHANICAL JOINTS SHALL BE RESTRAINED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND IN COMPLIANCE WITH AWWA STANDARDS.
- DUCTILE IRON PIPE MAY BE INSTALLED WITH LESS THAN 30" OF COVER, WHEN APPROVED BY THE ENGINEER. COVER OVER PIPE MUST CONSIST OF ROAD LIME ROCK THAT EXTENDS FROM ROADWAY SUB-BASE OR FINISHED GRADE DOWN TO SPRINGLINE OF PIPE IN A TRENCH WITH 12" OF LIME ROCK ON EITHER SIDE OF THE PIPE. MINIMUM COVER SHALL IN A TRENCH WITH 12" OF LIME ROCK ON EITHER SIDE OF THE PIPE. MINIMUM COVER SHALL BE 24". ALL COVERS AND LIDS WITHIN THE RIGHT OF WAY SHALL MEET THE REQUIRED LOADING CAPACITY.
- WHERE AN EXISTING WATER OR FORCE MAIN REQUIRES DEFLECTION TO CONNECT WITH OR PASS BY PROPOSED PIPE, THE AMOUNT OF DEFLECTION PER PIPE JOINT SHALL CONCUR WITH THE STANDARD UTILITY CROSSING DETAIL. THE LENGTH OF EXISTING PIPE TO BE DEFLECTED SHALL BE APPROVED BY THE ENGINEER.
- ALL PIPE DENOTED "GROUT, FILL & ABANDON IN-PLACE" SHALL BE EMPTIED, FLUSHED OUT AND COMPLETELY FILLED WITH GROUT. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE LOCAL, FEDERAL AND STATE ENVIRONMENTAL REQUIREMENTS.
- THE DRAWINGS, SUPPLEMENTARY DRAWINGS, SCHEDULES OR OTHER DATA RECEIVED FROM THE ENGINEER AND SHALL NOTIFY HIM OF ALL OMISSIONS, ERRORS, CONFLICTS, AND DISCREPANCIES FOUND THEREIN. FAILURE TO DISCOVER OR TO CORRECT ERRORS, CONFLICTS OR DISCREPANCIES SHALL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR UNSATISFACTORY WORK, FAULTY CONSTRUCTION OR IMPROPER OPERATION RESULTING THEREFROM, NOR FROM RECTIFYING SUCH CONDITION, AT HIS OWN EXPENSE.
- WHERE THE PROPOSED WATER OR FORCE MAIN CONFLICTS WITH OTHER EXISTING OR PROPOSED UTILITIES, THE NEW MAIN SHALL BE DEFLECTED AT PIPE JOINTS IN ACCORDANCE WITH THE STANDARD UTILITY CROSSING DETAIL. THE SPECIAL UTILITY CROSSING DETAIL WITH BENDS SHALL ONLY BE USED WHEN APPROVED BY THE ENGINEER.
- WHENEVER A MATERIAL, ARTICLE OR PIECE OF EQUIPMENT IS IDENTIFIED IN THE PROJECT MANUAL, INCLUDING DRAWINGS AND SPECIFICATIONS, BY REFERENCE TO MANUFACTURERS' OR VENDORS' NAMES, TRADE NAMES, CATALOG NUMBERS OR OTHERWISE, IT IS INTENDED MERELY TO ESTABLISH A STANDARD, UNLESS IT IS FOLLOWED BY WORDS INDICATING THAT NO SUBSTITUTION IS PERMITTED BECAUSE OF FORM, FIT, FUNCTION AND QUALITY. ANY MATERIAL, ARTICLE, OR EQUIPMENT OF OTHER MANUFACTURERS AND VENDORS WHICH WILL PERFORM OR SERVE THE REQUIREMENTS OF THE GENERAL DESIGN WILL BE CONSIDERED EQUALLY ACCEPTABLE, PROVIDED THE MATERIALS, ARTICLE OR EQUIPMENT SO PROPOSED IS, IN THE OPINION OF THE ENGINEER, EQUAL IN SUBSTANCE, QUALITY AND FUNCTION.
- COMPLIANCE TO "TRENCH SAFETY ACT" IS REQUIRED FOR ALL EXCAVATIONS IN EXCESS OF 5 FEET DEEP.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY:
SUNSHINE STATE 1 CALL1-800-432-4770
CITY OF COOPER CITY(954) 434-5519
TECO GAS DEPARTMENT(813) 275-3783
FPL(941) 927-4278
MANATEE COUNTY(941) 792-881
FRONTIER COMMUNICATION(813) 875-1014
CHARTER COMMUNICATIONS.....(727) 329-2951

III. SAFETY

- THE CONTRACTOR SHALL, AT ALL TIMES, CONFORM TO ALL APPLICABLE STATE AND FEDERAL REGULATIONS.
- THE SERVICES PROVIDED BY THE CONTRACTOR SHALL BE IN COMPLIANCE WITH ALL APPLICABLE GOVERNING REGULATIONS: CITY OF COOPER CITY, MANATTE COUNTY, OSHA GUILINES, SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT MANUALS AND GUIDELINES, STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, REGULATIONS AND GUIDELINES.

IV. MATERIALS

- EQUIPMENT (GRADERS, SHOVELS, ETC.) AND MATERIALS (SUCH AS GROUND SHEETS, HAY BALES, BOOMS, AND ABSORBENT PADS) FOR CLEANUP AND CONTINGENCIES SHALL BE PROVIDED IN SUFFICIENT QUANTITIES BY CONTRACTOR AND MAINTAINED AT ALL SITES FOR USE IN THE EVENT OF INADVERTENT LEAKS, SEEPS OR SPILLS.

V. AS BUILT DRAWINGS

- THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS WITH CURRENT FIELD CHANGES ACCURATELY MARKED AND SHALL DELIVER THESE PLANS TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION. THE CURRENT MARKINGS SHALL BE REVIEWED WITH THE ENGINEER DAILY, OR AS NEEDED, TO ASSURE THAT THEY BOTH AGREE THAT THE MARK-UPS REFLECT THE ACTUAL "AS-BUILT" CONDITIONS. THE CONTRACTOR WILL PREPARE PROJECT RECORD DRAWINGS AT THE CONCLUSION OF THE PROJECT BASED ON THE MARK-UP DRAWINGS AND TIES.
- THE CONTRACTOR SHALL MAINTAIN FIELD DRAWINGS AND ELECTRONIC DRAWINGS IN AUTOCAD 2013 OR LATEST VERSION TO REFLECT THE "AS-BUILT" ITEMS OF WORK AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE A RECORD SET OF "AS-BUILT" DRAWINGS ON REPRODUCIBLE MATERIAL. ONE SET OF DESIGN DRAWINGS ON REPRODUCIBLE MATERIAL WILL BE FURNISHED TO THE CONTRACTOR BY THE DESIGN ENGINEER AT THE CURRENT SQUARE FOOT PRICE. NO SEPARATE PAYMENT WILL BE MADE FOR THOSE "AS-BUILT" DRAWINGS.
- THE COST OF MAINTAINING RECORD CHANGES, AND PREPARATION OF THE AS-BUILT DRAWINGS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE AFFECTED ITEMS. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL FURNISH THE ENGINEER THE REPRODUCIBLE "AS-BUILT" DRAWINGS. THE COMPLETED AS-BUILT DRAWINGS SHALL BE DELIVERED TO THE ENGINEER AT LEAST 48 HOURS PRIOR TO FINAL INSPECTION

OF THE WORK. THE FINAL INSPECTION WILL NOT BE CONDUCTED UNLESS THE AS-BUILT DRAWINGS ARE IN THE POSSESSION OF THE ENGINEER. FINAL APPROVAL OF THE PROJECT IS SUBJECT TO THE FINAL REVIEW AND APPROVAL OF THE "AS-BUILT" INFORMATION FURNISHED TO THE REGULATORY AGENCIES, CITY OF COOPER CITY.

4. THE COMPLETED (OR FINAL) AS-BUILT DRAWINGS SHALL BE CERTIFIED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA. THIS CERTIFICATION SHALL CONSIST OF THE SURVEYOR'S EMBOSSED SEAL BEARING REGISTRATION NUMBER, THE SURVEYOR'S SIGNATURE AND DATE ON EACH SHEET OF THE DRAWING SET. IN ADDITION, THE KEY SHEET, COVER SHEET OR FIRST SHEET OF THE PLANS SET SHALL LIST THE BUSINESS ADDRESS AND TELEPHONE NUMBER OF THE SURVEYOR.

5. REPRESENTATIVE ITEMS OF WORK THAT SHOULD BE SHOWN ON THE AS-BUILT DRAWINGS AS VERIFIED, CHANGED OR ADDED ARE SHOWN BELOW:

6. PLANS:

I. STRUCTURE TYPES, LOCATION WITH GRADE OF RIM AND FLOW-LINE ELEVATIONS.

II. SEWER TYPE, LENGTH, MATERIAL, SIZE AND ELEVATIONS.

III. UTILITY TYPE, LENGTH, MATERIAL, SIZE AND ELEVATION IN CONFLICT STRUCTURES.

7. WATER AND SEWER PLANS: LOCATION OF ALL PIPE LINES, STRUCTURES, FITTINGS, VALVES, SUPPORTS AND APPURTENANCES. THIS SHALL BE IN NORTHING AND EASTING FORMAT (NAD 83 HORIZONTAL AND NAVD 88 VERTICAL). ALL MAIN ACCESS STRUCTURES, FITTINGS, VALVES AND SEWER LATERALS SHALL BE STATIONED BETWEEN MHS

8. AS-BUILTS OF PRESSURIZED LINES SHALL INCLUDE THE FOLLOWING INFORMATION: TOP OF PIPE AND FINISHED GRADE, LOCATIONS AND ELEVATIONS (TOP OF PIPE AND FINISHED GRADE) OF ALL FITTINGS, INCLUDE BENDS, TEES, VALVES, SADDLES, MANHOLES, CHANGES IN ALIGNMENT. ALL TIE-INS TO EXISTING LINES SHALL BE AS-BUILT.

9. CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION ON PLAN AND PROFILE VIEWS AS SHOWN ON DESIGN DRAWINGS.

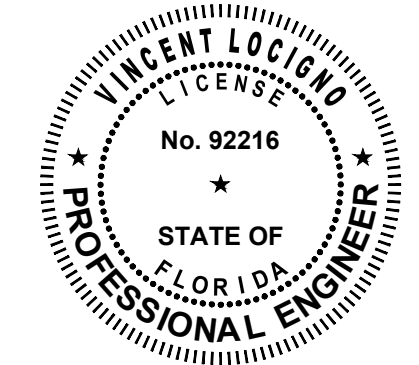
VERTICAL DATUM INFORMATION
ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CONVERSION FACTOR:
NAVD88 + 1.60 = NGVD29 IN THIS AREA

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Check positive response codes before you dig!

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ema
chen moore and associates
500 West Cypress Creek Road
Suite 630
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

REGISTRATION
VINCENT LOCIGNO, PE
REGISTRATION NO. 92216
DATE: 10/4/2023



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PROJECT INFORMATION

**PUMP STATION #55
GENERATOR
REPLACEMENT**

COOPER CITY,
FLORIDA

PROJECT NUMBER
22-0016.00006

CLIENT PROJECT NUMBER

VERIFY SCALES
0 = 1"
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ADJUST SCALES ACCORDINGLY

REVISIONS

DATE OF ISSUE
10/27/2023

DESIGNED BY
VL

DRAWN BY
JT

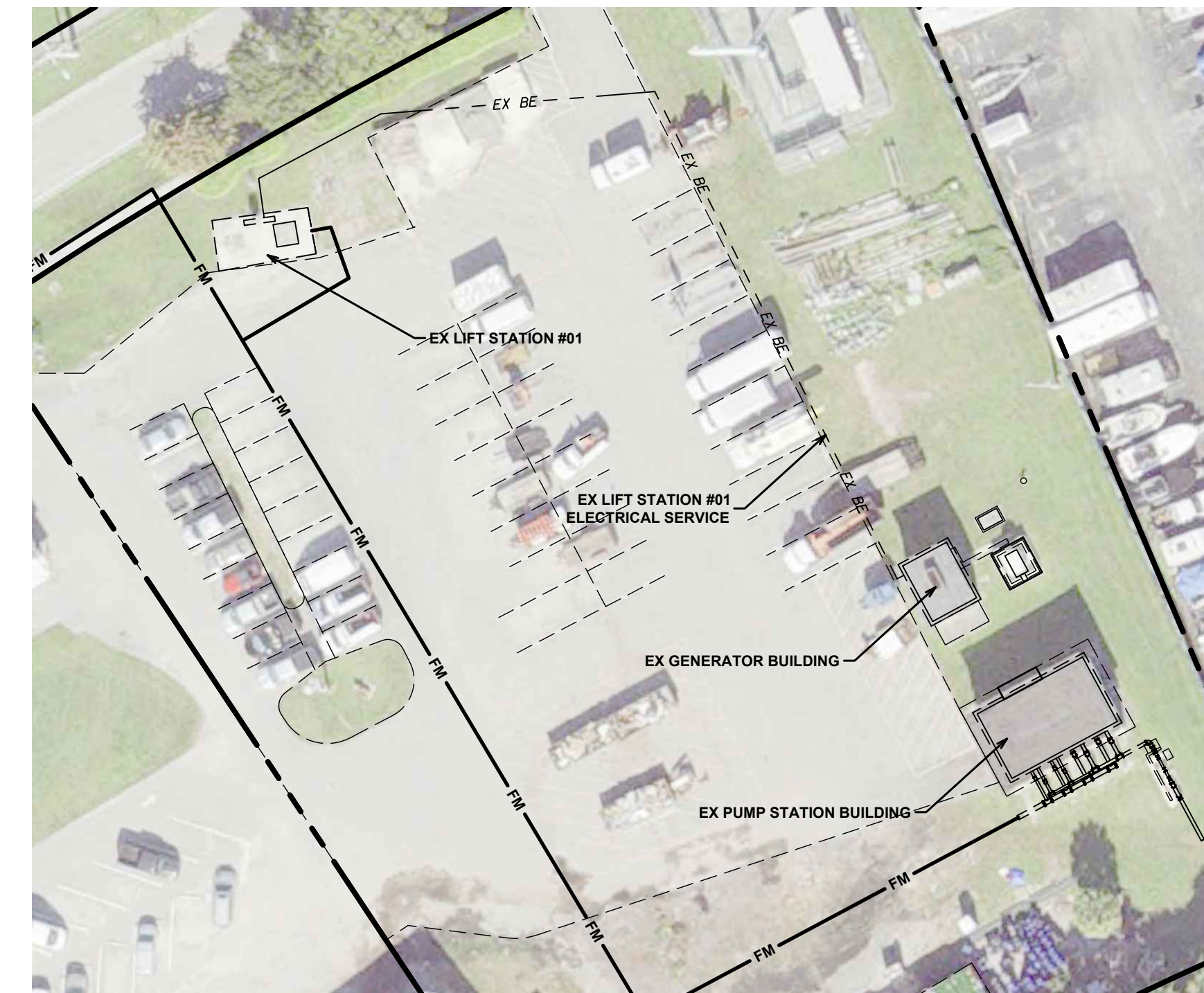
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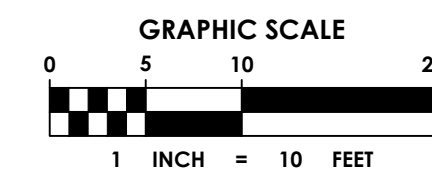
GENERAL NOTES

DRAWING NUMBER
GN-2
03 OF 06

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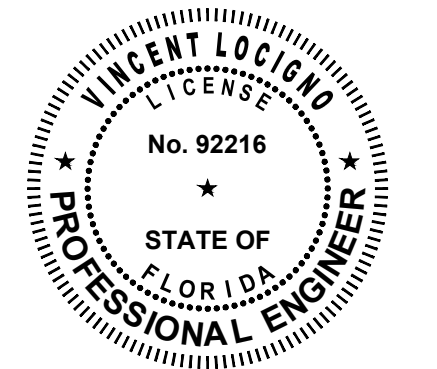
- DEMOLITION NOTES:**
- DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.
 - BEFORE PROCEEDING WITH DEMOLITION OPERATIONS THE CONTRACTOR IS TO DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS.
 - CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
 - DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR IN-USE FACILITIES WITHOUT PERMISSION FROM OWNER. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS AS REQUIRED BY GOVERNING REGULATIONS.
 - CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA.
 - PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
 - ADJACENT IMPROVEMENTS SHALL BE CLEANED OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
 - FOR SELECTIVE DEMOLITION, USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN.
 - DEMOLISH CONCRETE IN SMALL SECTIONS. CUT CONCRETE AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN MASONRY SAW OR HAND TOOLS; DO NOT USE POWER-DRIVEN IMPACT TOOLS.
 - INFORMATION SHOWN ON THE DRAWINGS AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER; HOWEVER, THIS INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION, CHARACTER, AND DEPTH OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSIST THE UTILITY COMPANIES, BY EVERY MEANS POSSIBLE, TO DETERMINE SAID LOCATIONS AND THE LOCATIONS OF RECENT ADDITIONS TO THE SYSTEMS NOT SHOWN.
 - REMOVAL, DEMOLITION, HAULING, AND DISPOSAL SHALL COMPLY WITH REGULATIONS BY F.D.E.P., E.P.A., AND ANY OTHER AUTHORITY HAVING JURISDICTION.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
 - ALL EXISTING PATHWAY AND STREET LIGHTING WILL REMAIN IN PLACE AND REMAIN IN SERVICE DURING CONSTRUCTION OPERATIONS.



VERTICAL DATUM INFORMATION
 ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
 CONVERSION FACTOR:
 NAVD88 + 1.60 = NGVD29 IN THIS AREA

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Check positive response codes before you dig!

REGISTRATION
 VINCENT LOCIGNO, PE
 REGISTRATION NO. 92216
 DATE: 10/4/2023



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PROJECT INFORMATION

**PUMP STATION #55
 GENERATOR
 REPLACEMENT**

COOPER CITY,
 FLORIDA

PROJECT NUMBER
 22-0016.00006

CLIENT PROJECT NUMBER

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DATE OF ISSUE
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 VL

DRAWN BY
 JT

CHECKED BY
 DD

DRAWING TITLE

**EXISTING
 CONDITION AND
 DEMOLITION PLAN**

DRAWING NUMBER

EC-1

04 OF 06

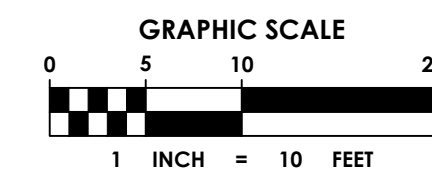
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GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, WHETHER SHOWN OR NOT, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
2. THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON FIELD OBSERVATION AND/OR AVAILABLE PLANS. THE EXACT LOCATION MAY VARY. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO TAKE THE NECESSARY PRECAUTIONS TO ENSURE PROPER SAFETY AND WORKMANSHIP WHEN WORKING IN THE VICINITY OF EXISTING UTILITY LINES.
4. CONTRACTOR SHALL PLAN ALL UTILITY CROSSINGS TO CONFIRM HORIZONTAL AND VERTICAL SEPARATIONS PRIOR TO CONSTRUCTION.
5. WATER & SEWER LINES SHALL BE LAID WITH A MINIMUM SIX (6) FOOT LATERAL SEPARATION FROM OBSTRUCTIONS (I.E. CULVERTS, STRUCTURES, ETC.) AND A MINIMUM TEN (10) FOOT CLEARANCE FROM TREES.
6. CONTRACTOR TO PROVIDE DETAILED AS-BUILTS SURVEYS THAT CLEARLY DEFINE THE AREAS OF WORK COMPLETED UNDER THIS CONTRACT INCLUDING BUT NOT LIMITED TO TOP OF PIPE ELEVATION, TOP OF ALL FITTINGS, GROUND ELEVATION, VALVE NUT ELEVATION, ETC.
7. ALL VALVES, FITTINGS, AND PIPE SHALL BE RESTRAINT PER DETAIL W-12.
8. CONTRACTOR MUST EXERCISE EXTREME CARE TO AVOID DAMAGE OR DISRUPTIONS TO ANY EXISTING UTILITIES. CONSTRUCTION SHALL PROTECT AND SUPPORT ALL EXISTING STRUCTURES AFFECTED BY THE PROJECT. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN DISCREPANCY WITH THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, IN WRITING, BEFORE PROCEEDING WITH THE WORK.
9. CONTRACTOR TO USE RESTRAINED JOINTS FOR ALL PROPOSED CONNECTIONS.
10. MINIMUM COVER FOR DUCTILE IRON PIPE SHALL BE 30" OR 36", WHERE SPECIFIED.

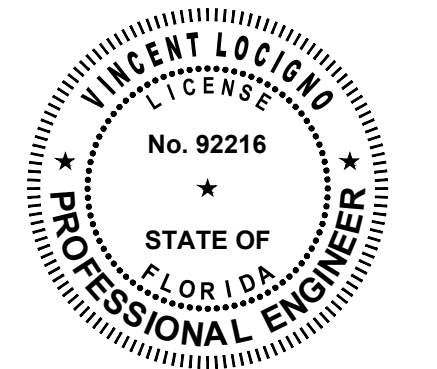


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PROJECT INFORMATION

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 REPLACEMENT**

COOPER CITY,
 FLORIDA

PROJECT NUMBER
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CLIENT PROJECT NUMBER

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DATE OF ISSUE
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DESIGNED BY
 VL

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 JT

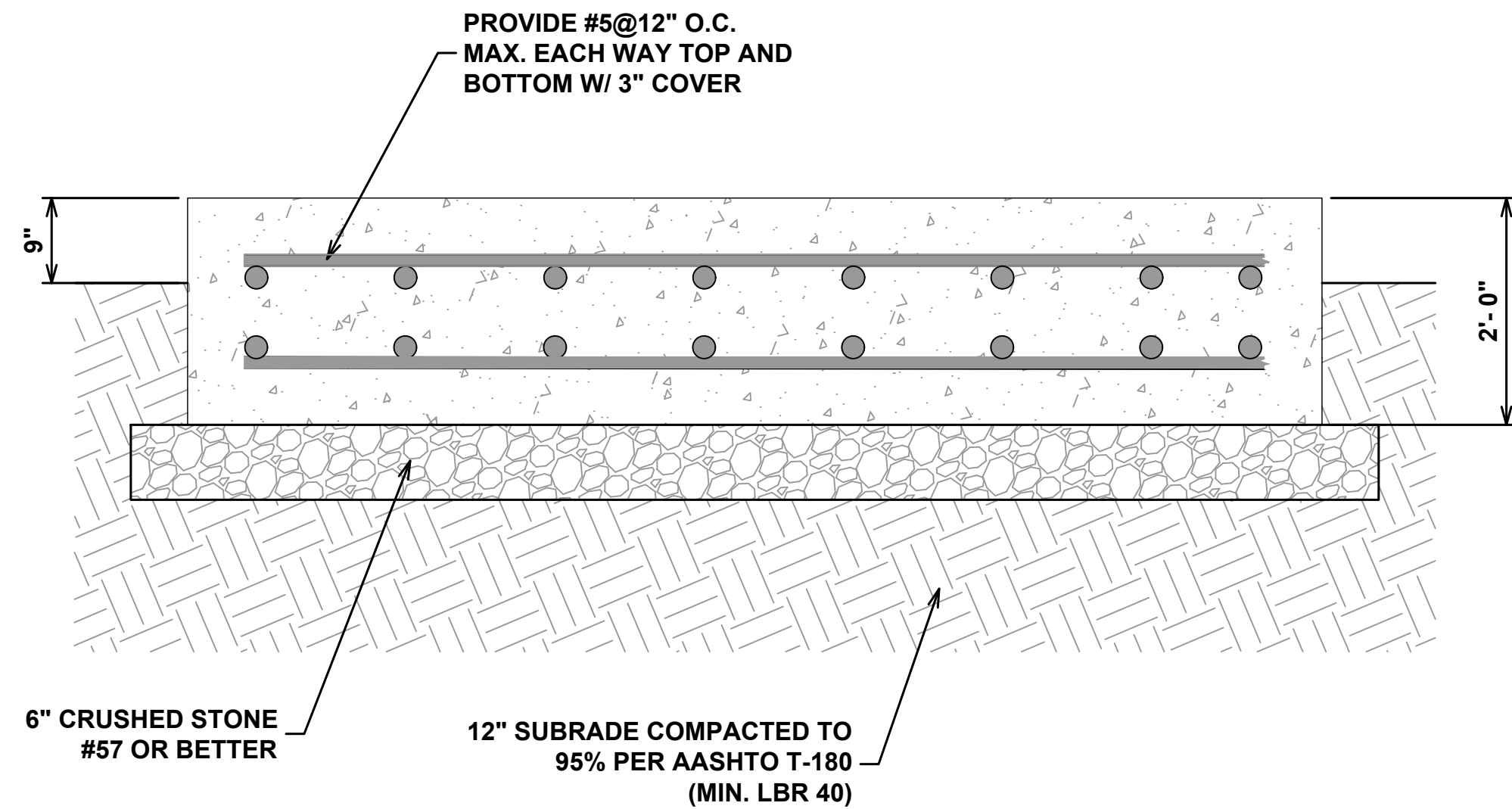
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**CIVIL
 ENGINEERING
 PLAN**

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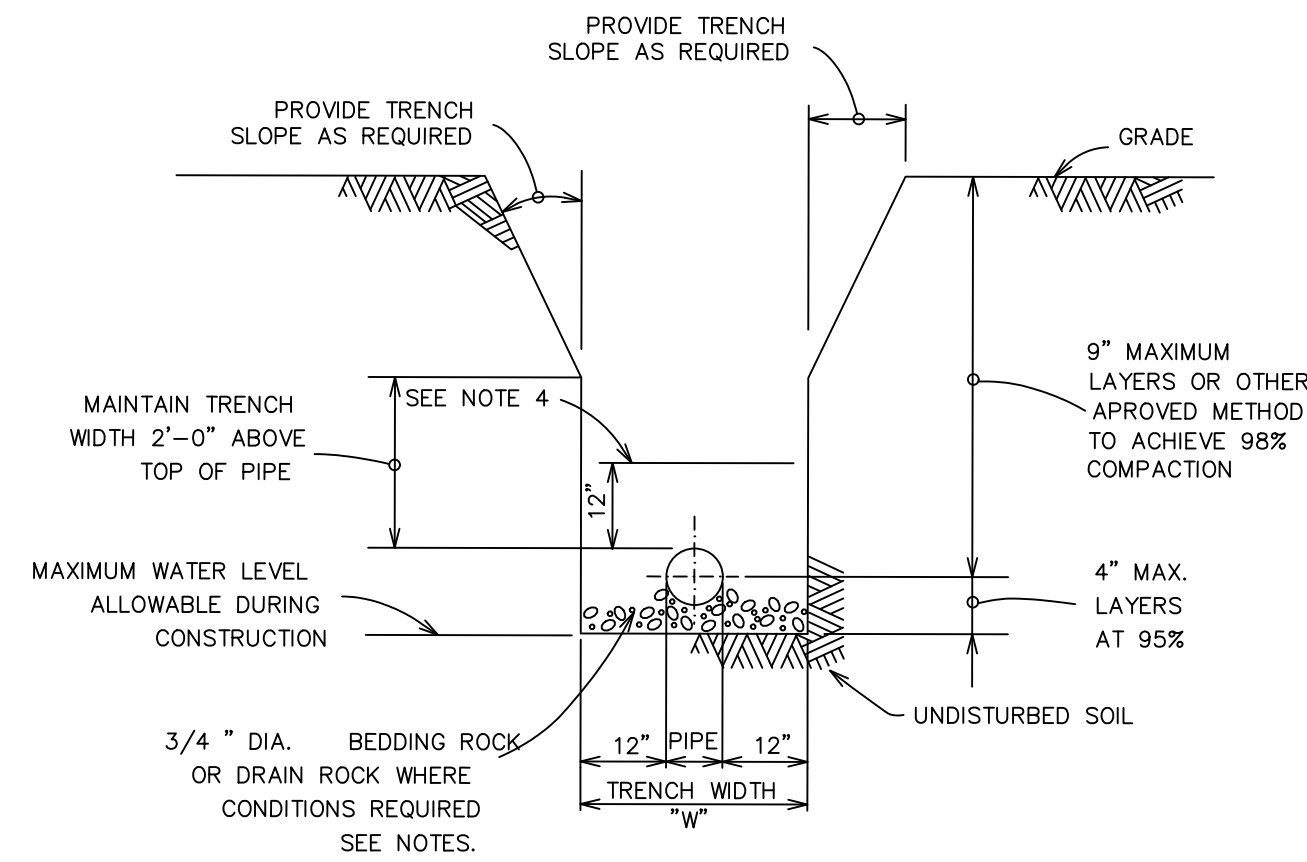
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 05 OF 06



- NOTES:**
1. FREEBOARD TO BE NO MORE THAN 12-INCHES.
 2. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE - 4,000 PSI.
 3. REBAR TO BE ASTM A615 GRADE 60.
 4. MINIMUM CLEAR COVER TO SLAB REINFORCEMENT IS 3-INCHES.
 5. SLAB REINFORCEMENT - #5 BARS @ 12-INCH ON CENTER BOTH WAYS, TOP AND BOTTOM.

#001 PROPOSED CONCRETE GENERATOR PAD

N.T.S.



NOTES

1. WHERE SOILS CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
3. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T-180.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.

(UNPAVED AREAS)
TRENCH DETAIL

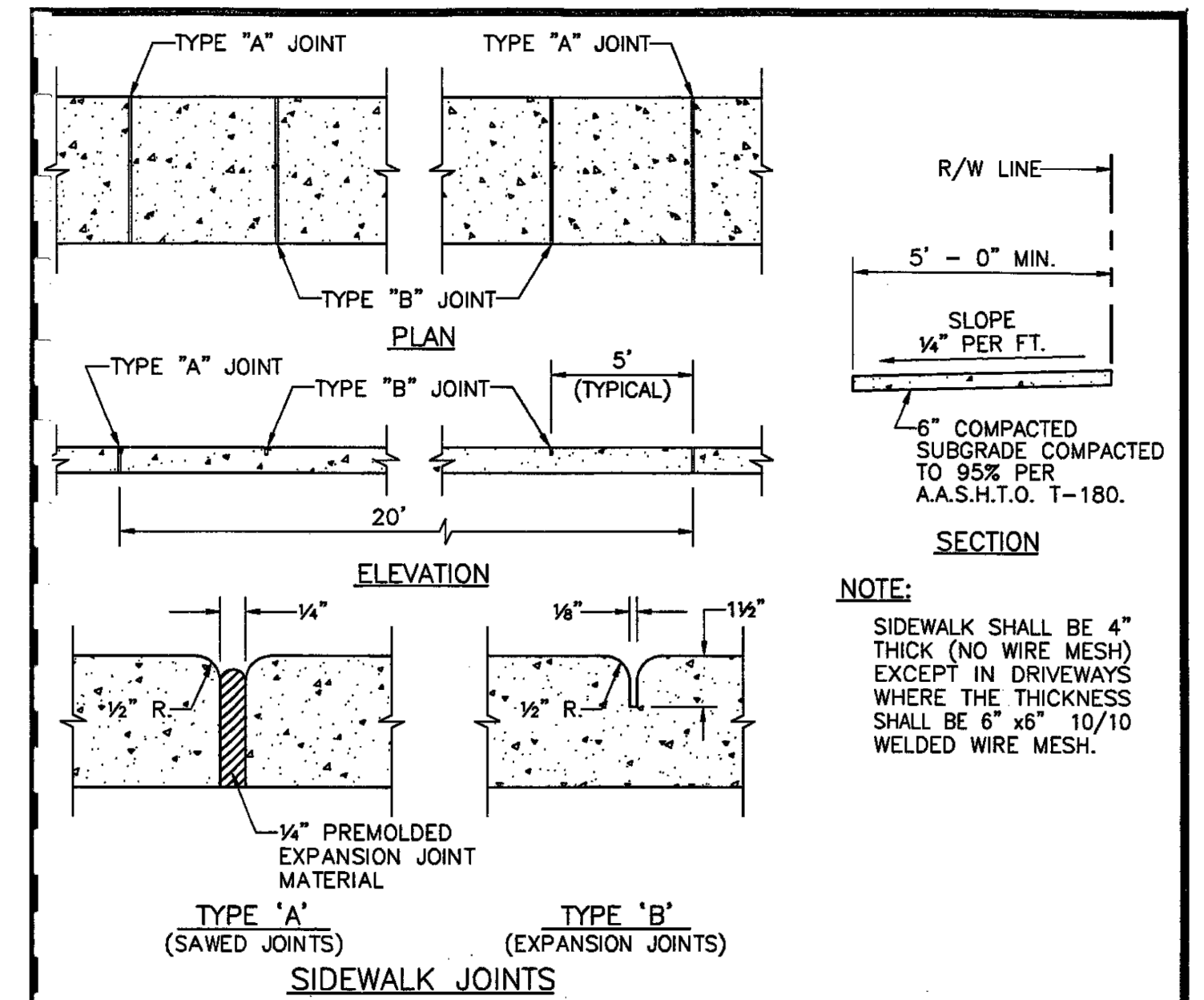


TABLE OF SIDEWALK THICKNESS

| | |
|------------------------------|----|
| RESIDENTIAL AREAS | 4" |
| AT DRIVEWAYS AND OTHER AREAS | 6" |

TABLE OF SIDEWALK WIDTHS

| | |
|--|----|
| SINGLE - FAMILY AREAS | 5' |
| MULTI - FAMILY AREAS | 5' |
| OTHER AREAS AS SPECIFIED BY THE CITY ENGINEER. | |

TABLE OF SIDEWALK JOINTS

| TYPE | LOCATION |
|------|---|
| 'A' | 20'-0" CENTER TO CENTER P.C. AND P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS. * WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES. |
| 'B' | 5'-0" CENTER TO CENTER ON SIDEWALKS. |

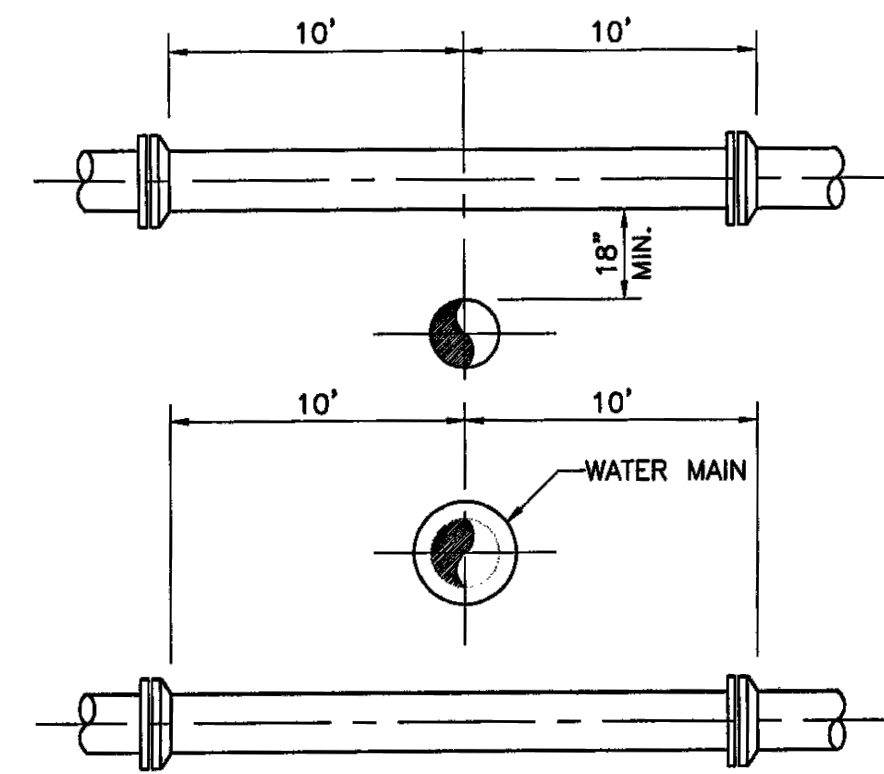
* AT THE DISCRETION OF THE ENGINEER.

CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD ROAD DETAIL
SIDEWALK JOINT DETAILS
& TYPICAL CONSTRUCTION

R-10



NOTES:

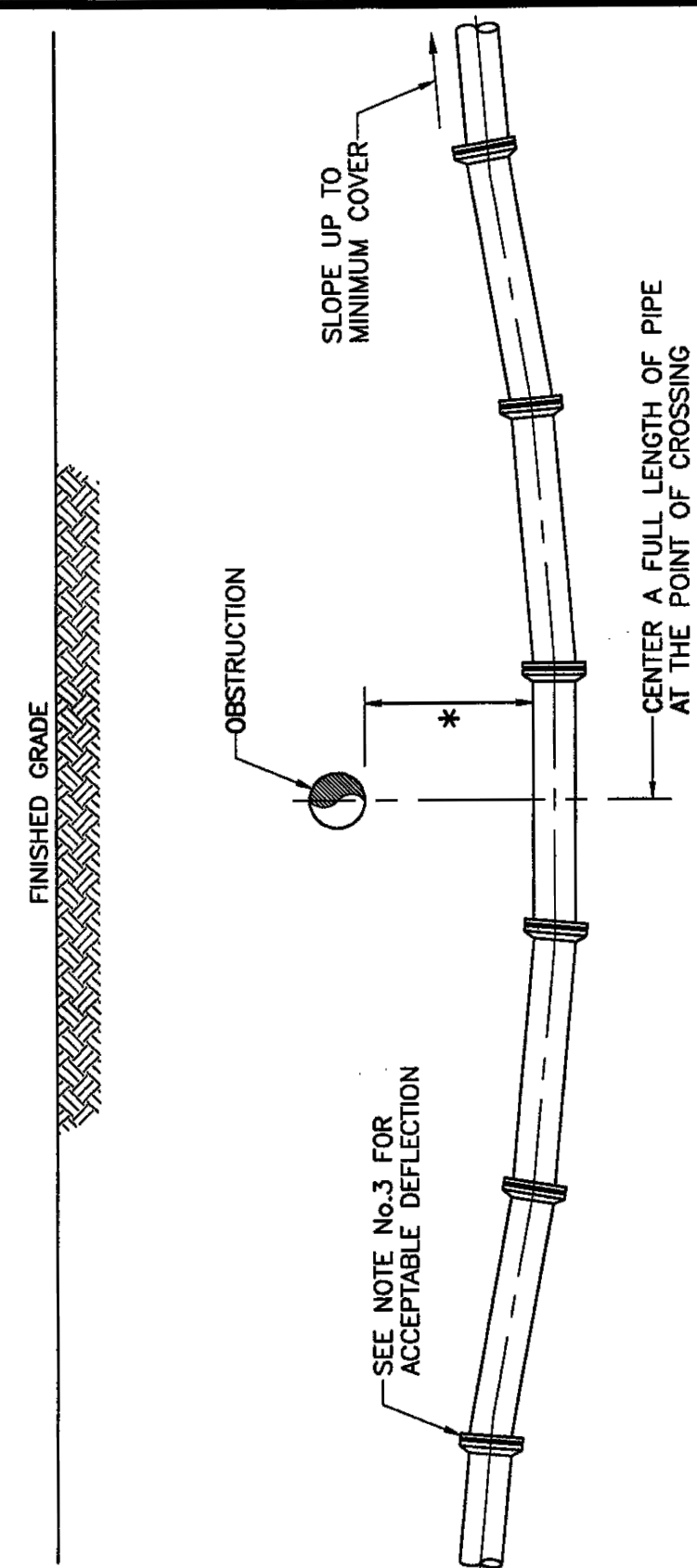
1. A WATER MAIN SHOULD CROSS OVER A SEWER MAIN WHEREVER POSSIBLE MAINTAINING A 36 INCH COVER FOR P.V.C., 30 INCH COVER FOR D.I.P. AND 18 INCH SEPARATION AS MINIMUMS.
2. WHEREVER A WATER MAIN CROSSES UNDER A SEWER MAIN, OR CROSSES OVER WITH LESS THAN 18 INCHES VERTICAL SEPARATION, THEN D.I.P. SHALL BE USED FOR BOTH PIPES FOR A DISTANCE OF 20 FEET CENTERED ON CROSSING WITH NO JOINTS WITHIN 10 FEET OF THE CROSSING.
3. 18 INCH SEPARATION SHOULD BE MAINTAINED BETWEEN ALL PIPES (STORM, SEWER, WATER) WHENEVER POSSIBLE. 12 INCHES IS THE ABSOLUTE MINIMUM SEPARATION WITH D.I.P. ALLOWED FOR ANY SEPARATION LESS THAN 18 INCHES.
4. MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN WATER AND SEWER AS A MINIMUM.
5. 3 FOOT HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN SEWER MAINS AND UTILITY OBSTRUCTIONS (CATCH BASINS, CONCRETE POLES, ETC.)

CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD SANITARY
SEWER DETAIL
UTILITY CROSSING
GENERAL REQUIREMENTS

S-11



NOTES:

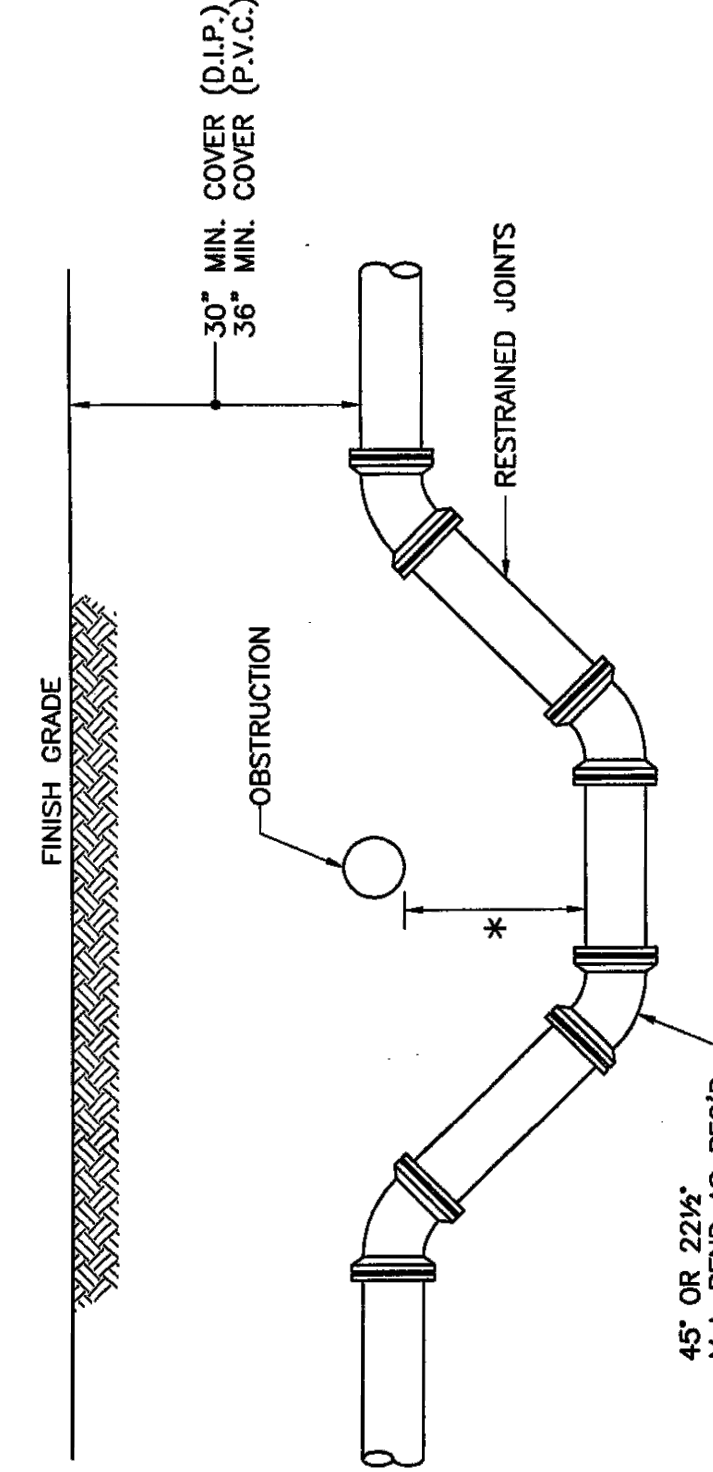
1. (C) 18" MINIMUM CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS. 12" MINIMUM CLEARANCE REQUIRED FOR OTHER UTILITIES CROSSINGS.
2. THE DEFLECTION TYPE CROSSING SHALL BE USED WHENEVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
3. CONSTRUCT CROSSING USING 75% OF MANUFACTURER'S MAXIMUM JOINT DEFLECTION (MAXIMUM).

CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD SANITARY
SEWER DETAIL
UTILITY CROSSING
DEFLECTION TYPE

S-12



NOTES:

1. (C) 18" MINIMUM CLEARANCE REQUIRED FOR WATER & SEWER MAIN CROSSINGS. 12" MIN. CLEARANCE REQUIRED FOR OTHER UTILITIES CROSSINGS. SEE ENCASUREMENT DETAIL IF MIN. CLEARANCE CAN NOT BE OBTAINED.

CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD SANITARY
SEWER DETAIL
UTILITY CROSSING
FITTING TYPE

S-13

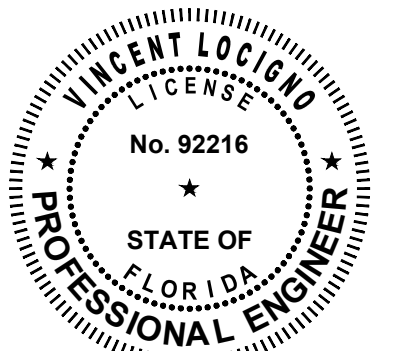
VERTICAL DATUM INFORMATION
ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CONVERSION FACTOR:
NAVD88 + 1.60 = NGVD29 IN THIS AREA



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REGISTRATION
VINCENT LOCIGNO, PE
REGISTRATION NO. 92216
DATE: 10/4/2023



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PROJECT INFORMATION

**PUMP STATION #55
GENERATOR
REPLACEMENT**

COOPER CITY,
FLORIDA

PROJECT NUMBER
22-0016.00006

CLIENT PROJECT NUMBER

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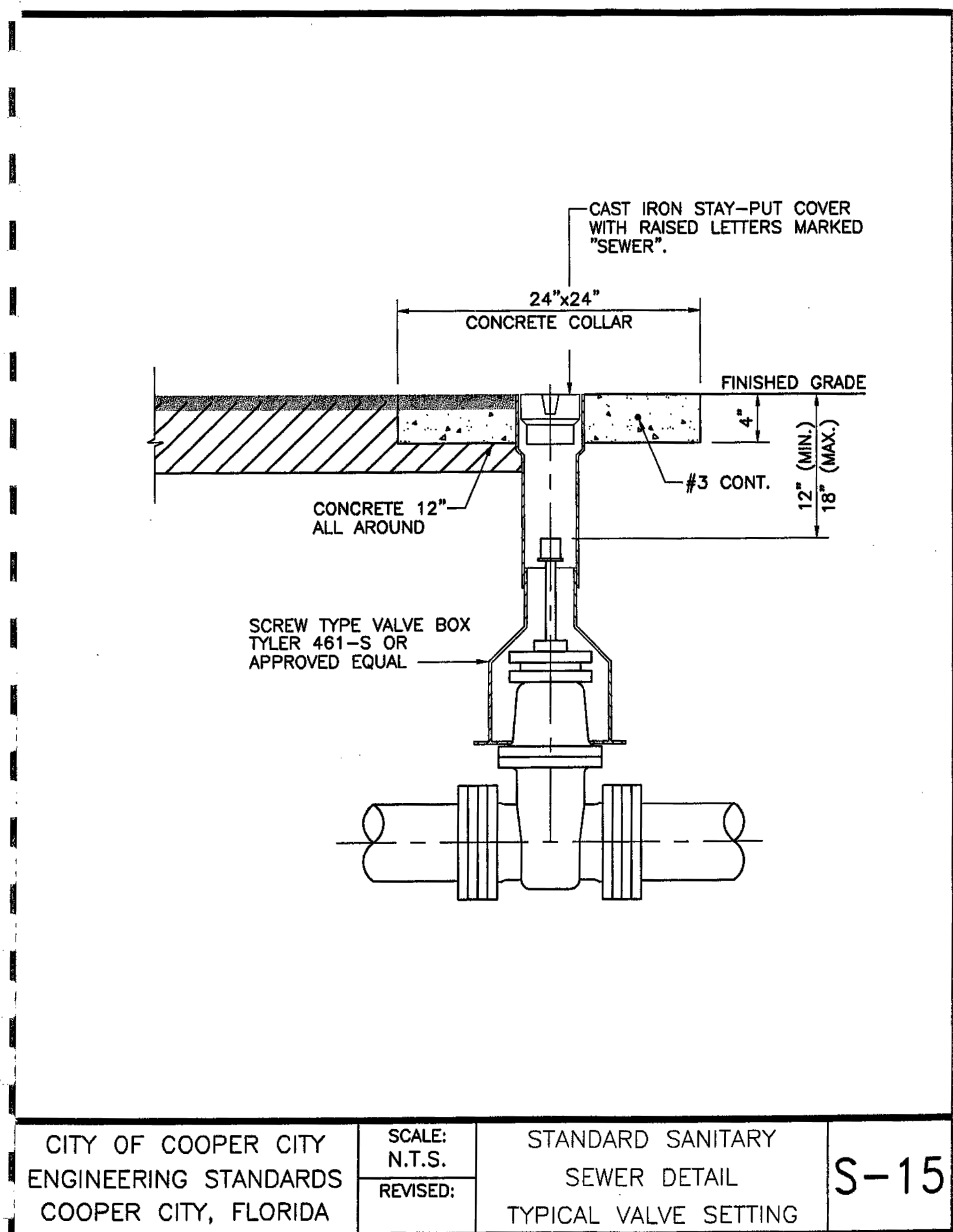
DETAILS

DRAWING NUMBER

DET-1

06 OF 06

BID SET

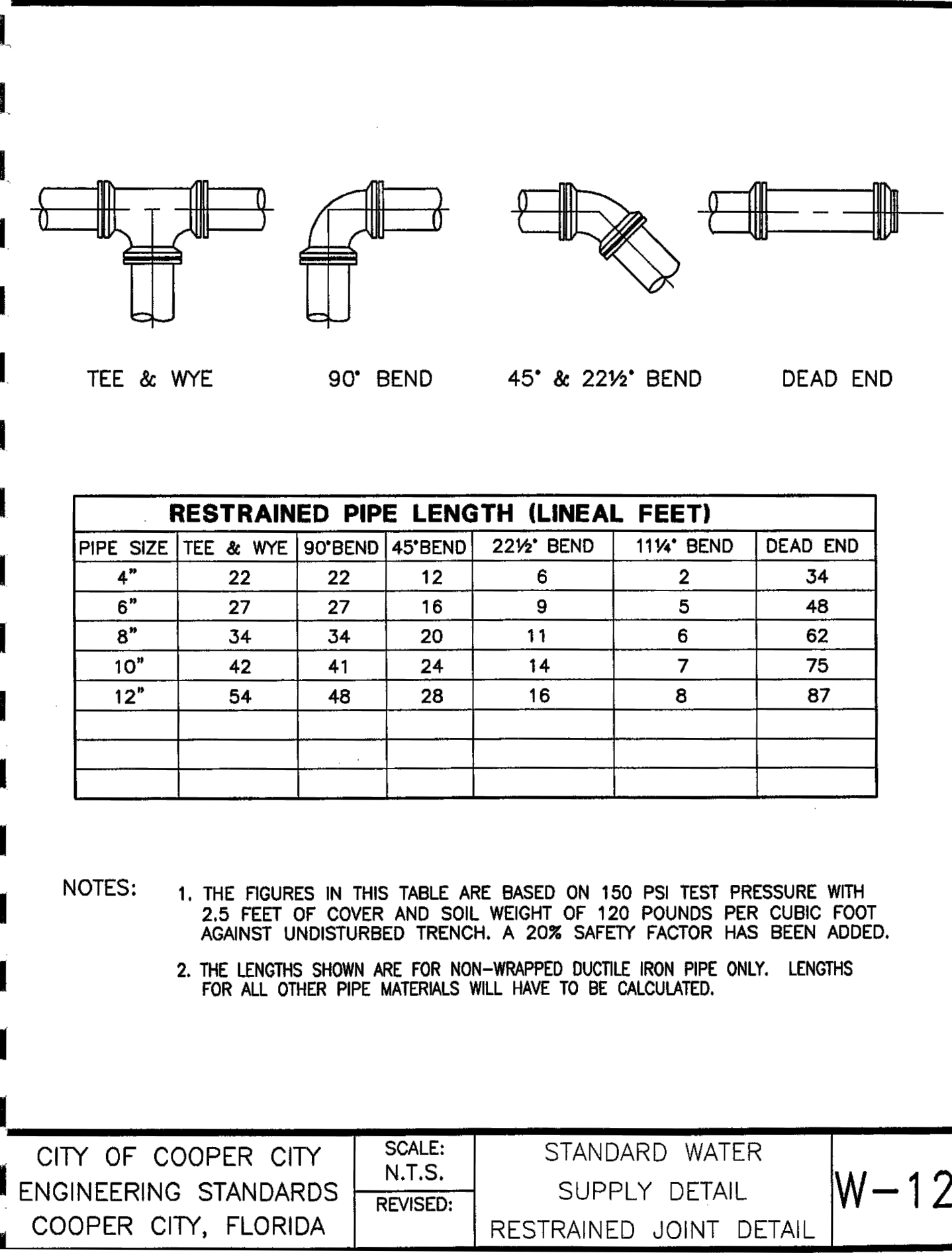


CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD SANITARY
SEWER DETAIL
TYPICAL VALVE SETTING

S-15



CITY OF COOPER CITY
ENGINEERING STANDARDS
COOPER CITY, FLORIDA

SCALE:
N.T.S.
REVISED:

STANDARD WATER
SUPPLY DETAIL
RESTRAINED JOINT DETAIL

W-12

NOTES ON WATER-SEWER SEPARATION

1. SANITARY SEWERS AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

WHERE SANITARY SEWERS FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.

ALL CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE ARRANGED TO MET THE CROSSING REQUIREMENTS ABOVE.

2. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

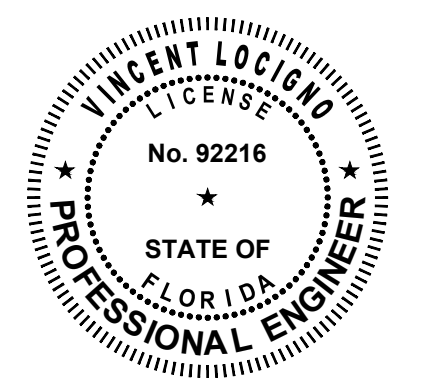
WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

3. ALL DIP SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN.

#002 SEPARATION DETAIL

N.T.S.

REGISTRATION
VINCENT LOGIGNO, PE
REGISTRATION NO. 92216
DATE: 10/4/2023



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PROJECT INFORMATION

**PUMP STATION #55
GENERATOR
REPLACEMENT**

COOPER CITY,
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PROJECT NUMBER
22-0016.00006

CLIENT PROJECT NUMBER

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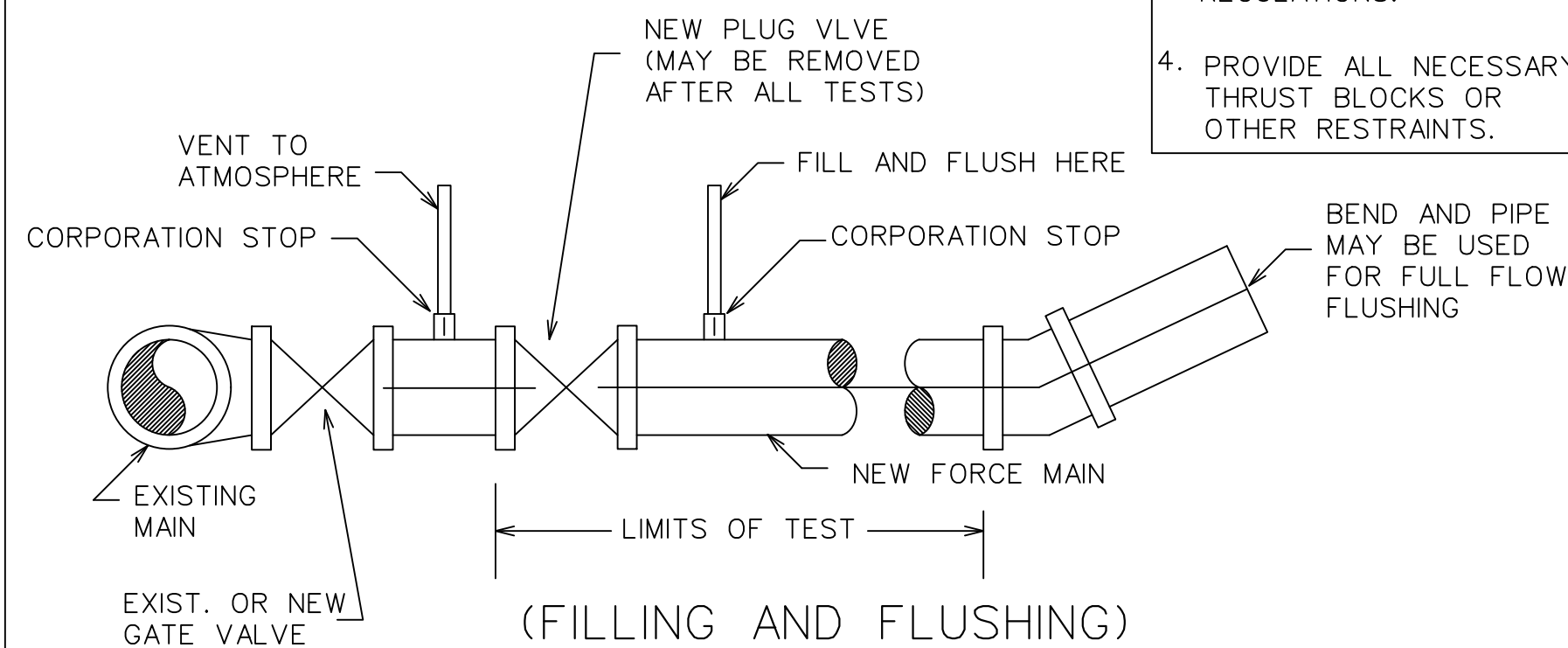
DET-2
07 OF 06

BID SET

Plot Date: 10/4/2023 8:34:31 AM Username: vlogigno Layout Name: DET-2
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THIS IS ONLY FLUSHING METHOD APPROVED BY COOPER CITY UTILITIES AND FIRE DEPARTMENTS SINCE OTHER METHODS DO NOT REMOVE BIG ROCKS, CANS, BOTTLES, AND OTHER DEBRIS FROM MAINS. ALL FIRE HYDRANTS AND DETECTOR CHECK VALVES MUST BE INSPECTED AND TESTED TO ASSURE NO SUCH FOREIGN OBJECTS ARE IN THE FIRE FLOW.

OTHER METHODS FOR FLUSHING MUST RECEIVE APPROVAL FROM THE UTILITY COMPANY.

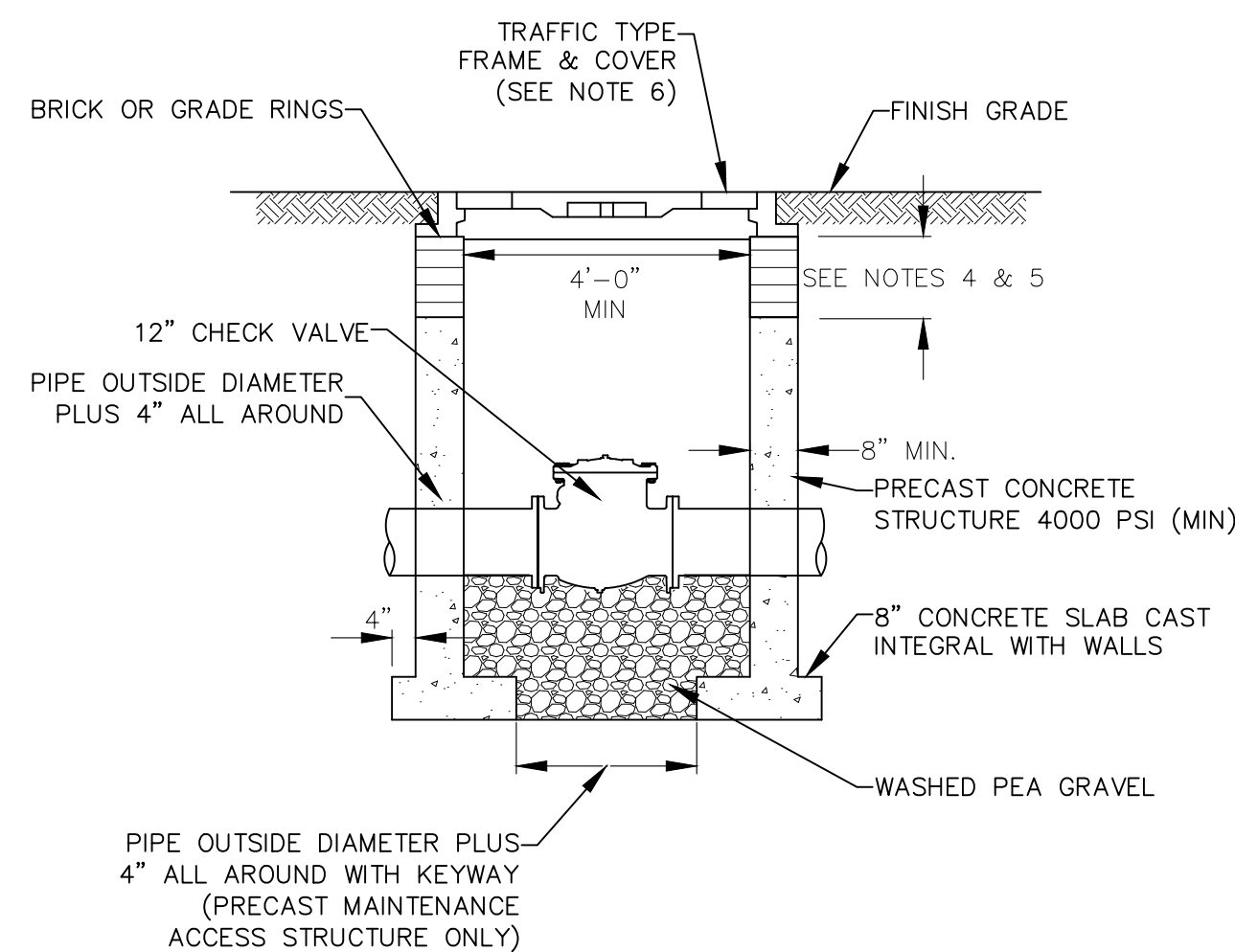


#003 FILLING AND FLUSHING CONNECTION DETAIL

N.T.S.

NOTES:

1. REMOVE TEMPORARY CONNECTION AT CORPORATION STOPS ON NEW MAIN AFTER FILLING AND FLUSHING HAS BEEN COMPLETED.
2. DO NOT REMOVE TEMPORARY CONNECTION AT CORPORATION STOP ON NEW MAIN UNTIL ALL TESTING HAS BEEN COMPLETED.
3. COMPLY WITH ALL BROWARD COUNTY HEALTH DEPT. REGULATIONS.
4. PROVIDE ALL NECESSARY THRUST BLOCKS OR OTHER RESTRAINTS.



1. LIFT HOLES ARE TO BE SEALED WITH MORTAR INSIDE AND OUTSIDE AFTER INSTALLATION.
2. MAINTENANCE ACCESS STRUCTURE WALLS TO BE COATED INSIDE AND OUTSIDE WITH 16 MIL THICKNESS COAL TAR EPOXY.
3. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF, EXPANDING GROUT. ACTUAL LOCATION AND MAINTENANCE ACCESS STRUCTURE FRAME ELEVATION SHALL BE DETERMINED BY ENGINEER BASED ON AS-BUILT SURVEY DATA.
4. THE CHIMNEY AREA SHALL BE MINIMUM OF 4" AND A MAXIMUM OF 12" IN HEIGHT. A MINIMUM OF 3 COURSES OF BRICK SHALL BE INSTALLED.
5. GRADE RINGS ARE AN ACCEPTABLE ALTERNATIVE TO BRICK. A MINIMUM OF 3 RINGS SHALL BE INSTALLED. SET IN TWO STRIPS OF SEALANT/ADHESIVE COMPOUND ON EACH SEALING FACE.
6. SET MAINTENANCE ACCESS STRUCTURE FRAME ON A BED OF PORTLAND CEMENT AND SILICA SAND. BRING MORTAR UP OVER FRAME.

#004 CHECK VALVE AND STRUCTURE

N.T.S.

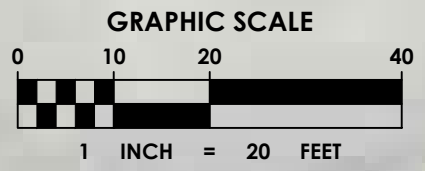
VERTICAL DATUM INFORMATION
ALL ELEVATIONS SHOWN ARE IN NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CONVERSION FACTOR:
NAVD88 + 1.60 = NGVD29 IN THIS AREA



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Plot Date: 12/15/2022 4:32:57 PM Username: Steve Layout Name: E-1
 Folder Path: T:\SEC 2022\22-0016\55\Electrical Dwg\ Cooper City Repump Station 55\Electrical Site Plan.dwg
 Filename: 22-0016.00006 Electrical Site Plan.dwg



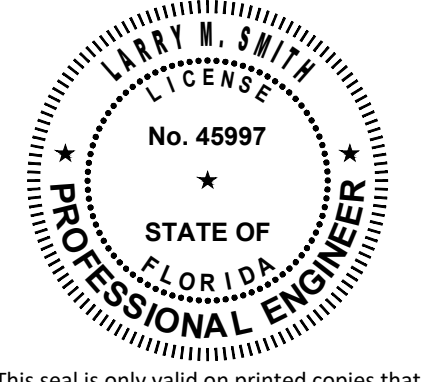
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ema
 chen moore and associates
 500 West Cypress Creek Road
 Suite 630
 Ft. Lauderdale, FL 33309
 954.730.0707
 www.chenmoore.com

REGISTRATION
 LARRY M. SMITH, PE
 REGISTRATION NO. 45997
 DATE: 12/15/2022



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SEC Smith Engineering Consultants, Inc.
 State Auth. #8228
 2161 Palm Beach Lakes Blvd., Suite 312
 West Palm Beach, FL 33409
 (561) 616-3911 Fax (561) 616-3912
 www.smithengineeringconsultants.com



PROJECT INFORMATION
**PUMP STATION #55
 GENERATOR
 REPLACEMENT**

COOPER CITY,
 FLORIDA
 PROJECT NUMBER
 22-0016.00006
 CLIENT PROJECT NUMBER

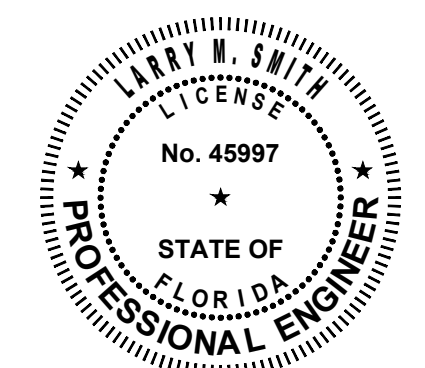
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DATE OF ISSUE
 12/16/22
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 SPH
 DRAWN BY
 SPH
 CHECKED BY
 LMS
 DRAWING TITLE

**ELECTRICAL SITE
 PLAN**

DRAWING NUMBER
E-1
 01 OF 04



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PROJECT INFORMATION

PUMP STATION #55 GENERATOR REPLACEMENT

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 PROJECT NUMBER 22-0016.00006
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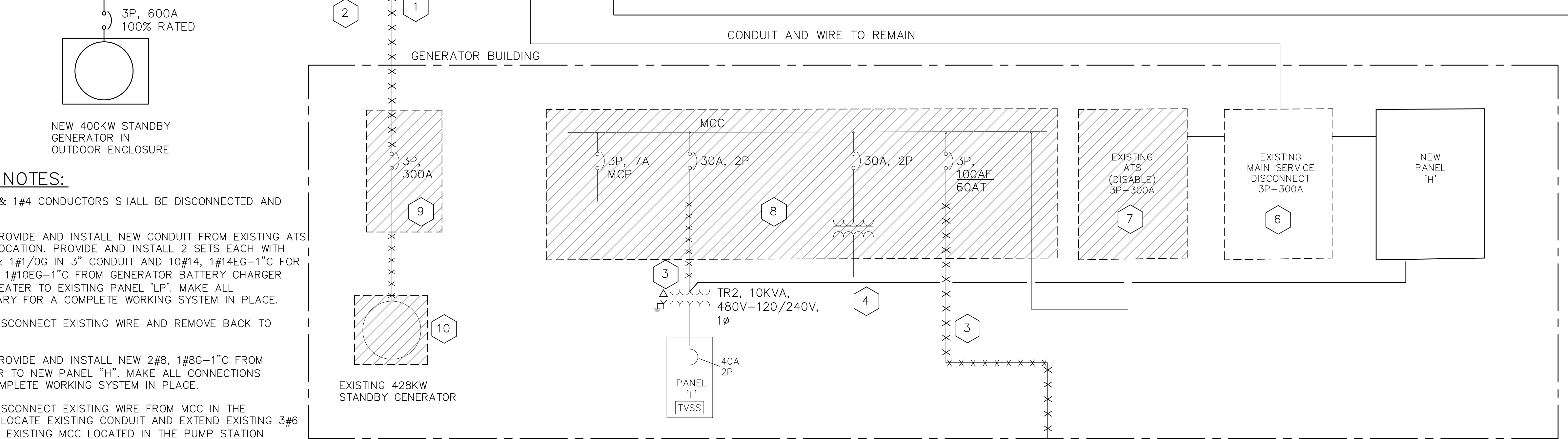
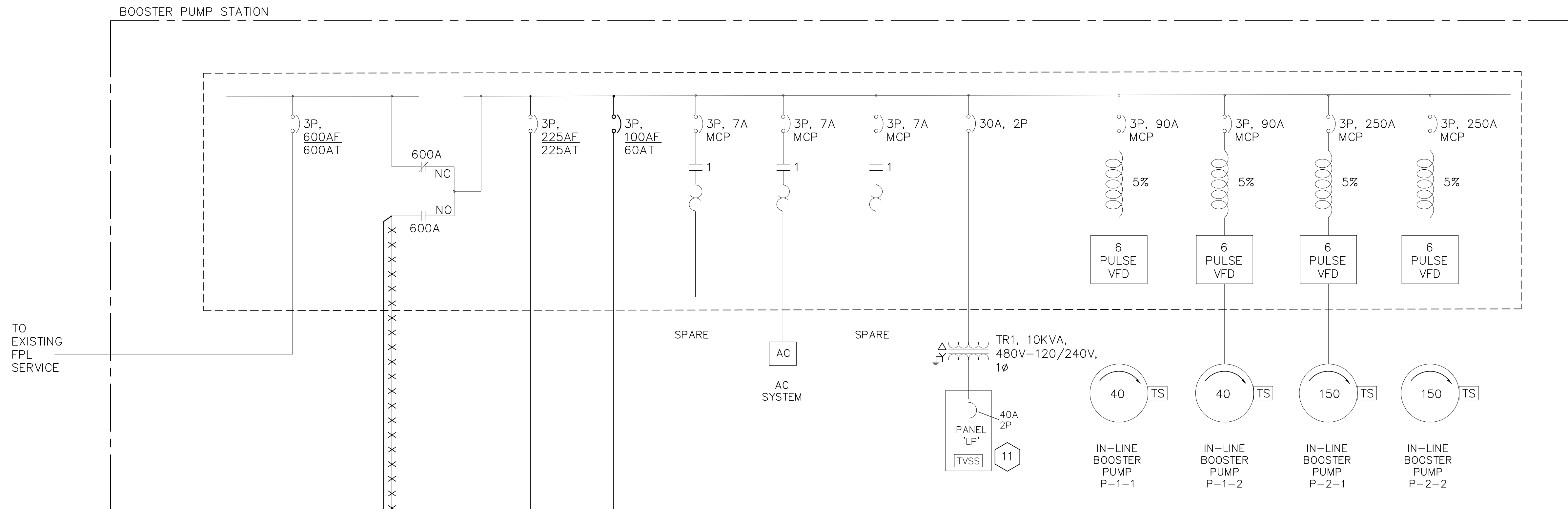
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 CHECKED BY LMS
 DRAWING TITLE

ELECTRICAL ONE LINE DIAGRAM

DRAWING NUMBER **E-2**
 02 OF 04



ONE LINE DIAGRAM MODIFICATIONS
 NO CHANGE IN LOAD

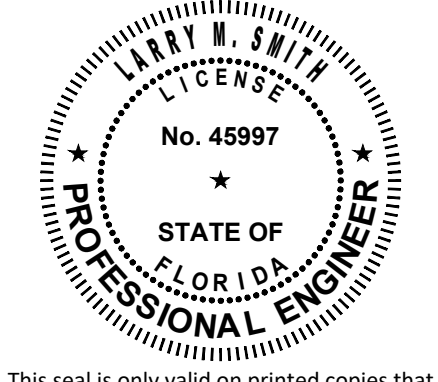
ELECTRICAL KEY NOTES:

- 1 EXISTING 3#350KCMIL & 1#4 CONDUCTORS SHALL BE DISCONNECTED AND REMOVED COMPLETELY.
- 2 CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUIT FROM EXISTING ATS TO NEW GENERATOR LOCATION. PROVIDE AND INSTALL 2 SETS EACH WITH 3#350KCMIL, 1#1/0N & 1#1/0G IN 3" CONDUIT AND 10#14, 1#14EG-1" C FOR CONTROL AND 4#10 & 1#10EG-1" C FROM GENERATOR BATTERY CHARGER AND JACKET WATER HEATER TO EXISTING PANEL 'LP'. MAKE ALL CONNECTIONS NECESSARY FOR A COMPLETE WORKING SYSTEM IN PLACE.
- 3 CONTRACTOR SHALL DISCONNECT EXISTING WIRE AND REMOVE BACK TO SOURCE.
- 4 CONTRACTOR SHALL PROVIDE AND INSTALL NEW 2#8, 1#8G-1" C FROM EXISTING TRANSFORMER TO NEW PANEL "H". MAKE ALL CONNECTIONS NECESSARY FOR A COMPLETE WORKING SYSTEM IN PLACE.
- 5 CONTRACTOR SHALL DISCONNECT EXISTING WIRE FROM MCC IN THE GENERATOR BUILDING. LOCATE EXISTING CONDUIT AND EXTEND EXISTING 3#6 & 1#10G-1" C TO THE EXISTING MCC LOCATED IN THE PUMP STATION BUILDING. PROVIDE AND INSTALL NEW 3P-60A BREAKER IN EXISTING SPACE. PROVIDE NEW DOOR ON MCC. BREAKER SHALL MATCH EXISTING MCC AIC RATING. MAKE ALL CONNECTIONS NECESSARY FOR A COMPLETE WORKING SYSTEM IN PLACE.
- 6 CONTRACTOR SHALL REMOVE EXISTING MAIN CIRCUIT BREAKER AND INSTALL NEW 3P-225A-480V CIRCUIT BREAKER IN EXISTING ENCLOSURE. MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.
- 7 CONTRACTOR SHALL DISCONNECT ATs AND REMOVE COMPLETELY.
- 8 CONTRACTOR SHALL DISCONNECT MCC WIRING AND REMOVE COMPLETELY.
- 9 CONTRACTOR SHALL DISCONNECT EXISTING BREAKER CABINET AND REMOVE COMPLETELY.
- 10 CONTRACTOR SHALL DISCONNECT EXISTING GENERATOR AND REMOVE COMPLETELY.
- 11 CONTRACTOR SHALL CONNECT BATTERY CHARGER TO EXISTING 1P-20A SPARE BREAKER AND THE JACKET WATER HEATER TO A NEW 2P-30A BREAKER IN EXISTING PANEL "LP". MAKE ALL CONNECTIONS NECESSARY FOR A COMPLETE WORKING SYSTEM IN PLACE. MATCH AIC RATING FOR BREAKER.

VERTICAL DATUM INFORMATION
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PROJECT INFORMATION

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COOPER CITY,
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PROJECT NUMBER
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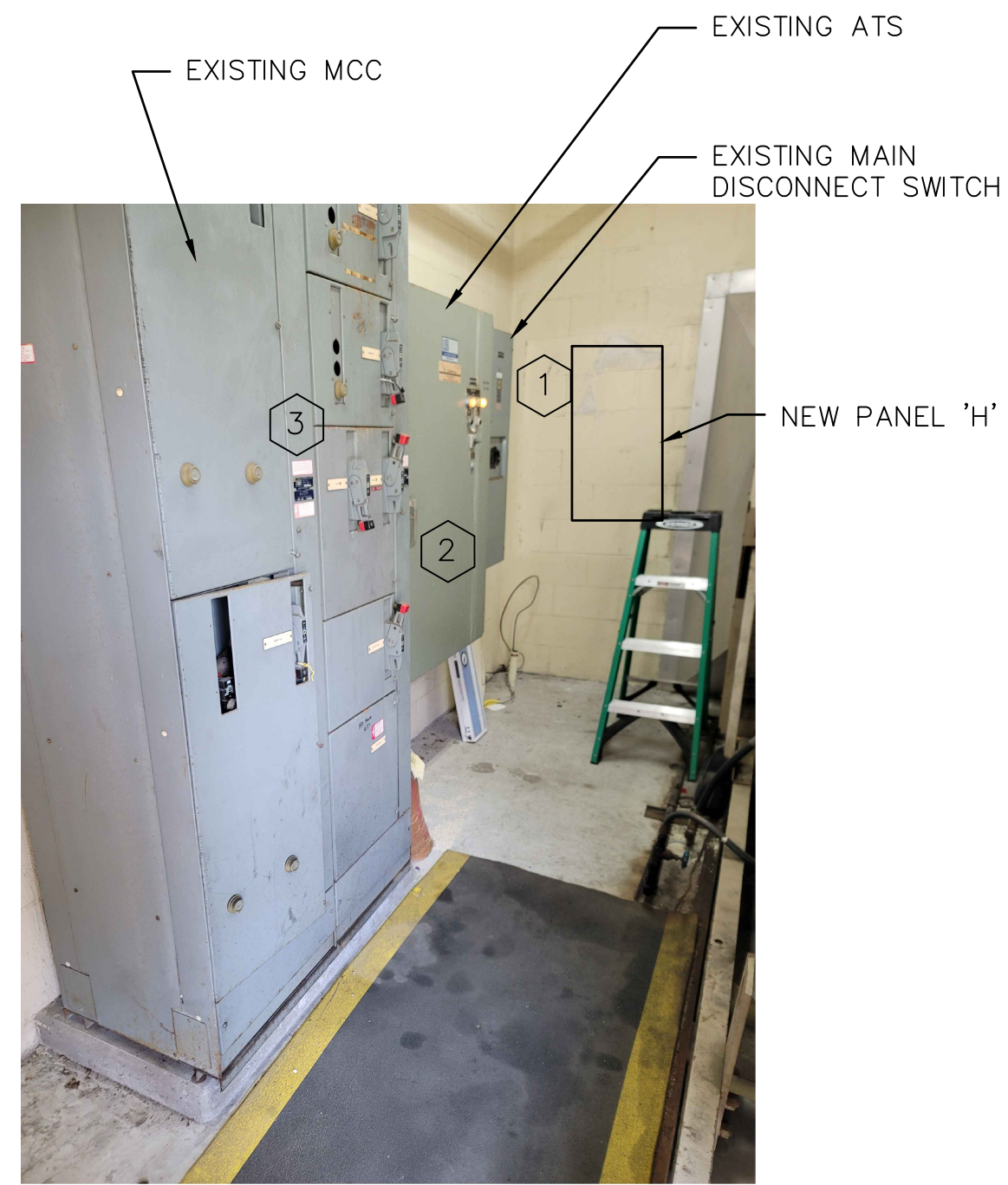
DRAWING TITLE

**ELECTRICAL
 DETAILS**

DRAWING NUMBER
E-3
 03 OF 04

ELECTRICAL KEY NOTES:

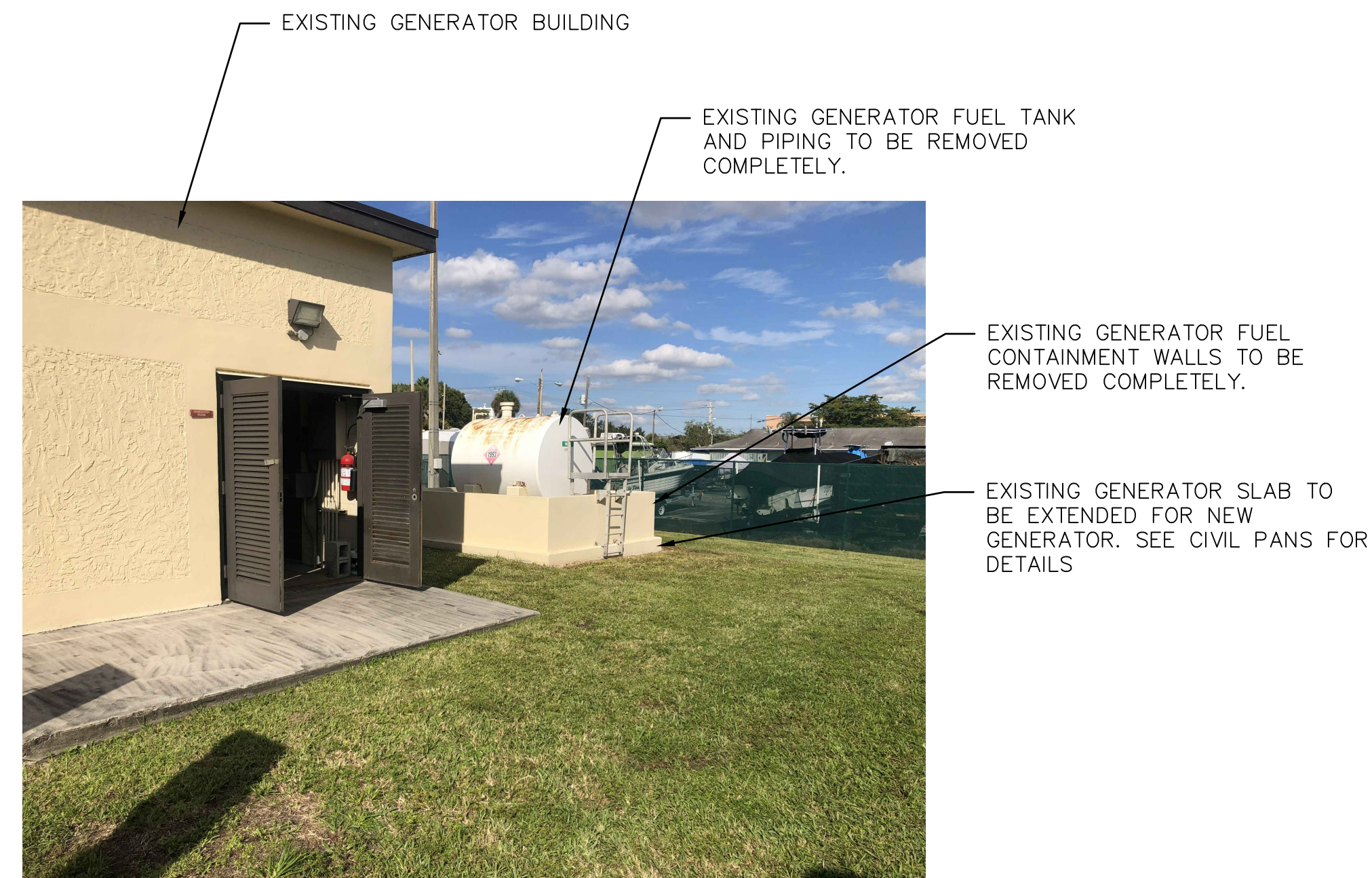
- 1 EXISTING MAIN DISCONNECT. SEE RISER ON DRAWING E-2 FOR MODIFICATIONS.
- 2 EXISTING ATS TO BE REMOVED COMPLETELY.
- 3 EXISTING MCC TO BE REMOVED COMPLETELY.
- 4 EXISTING GENERATOR TO BE REMOVED COMPLETELY.
- 5 EXISTING GENERATOR DAY TANK AND ALL PIPING TO BE REMOVED COMPLETELY.



GENERATOR BUILDING PHOTO 1



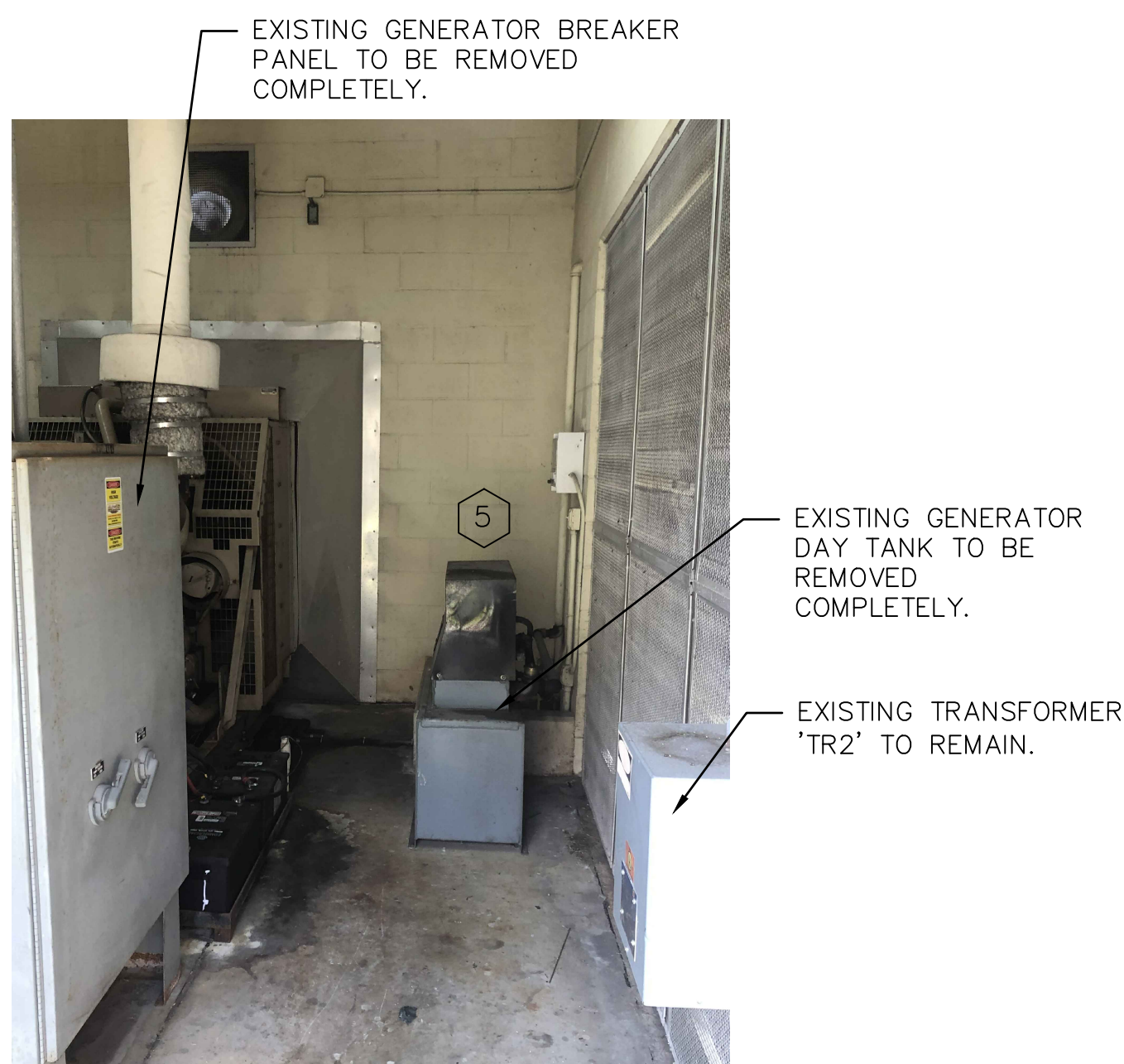
GENERATOR BUILDING PHOTO 2



GENERATOR BUILDING PHOTO 5



GENERATOR BUILDING PHOTO 3



GENERATOR BUILDING PHOTO 4

| PANEL "H" (1)(2) | | | | | | | | | | | | | | | | | | |
|---|-------------|------|------|------|------|----------|----------|----------|----------|----------|----------|------|------|------|------|-------------|-----------------|----|
| MOUNTING: SURFACE (NEW) VOLT: 480/277V, 3Ø, 3W | | | | | | | | | | | | | | | | | | |
| SHORT CIRCUIT RATING: 42K AIC MAIN BUS AMPS: 225 A | | | | | | | | | | | | | | | | | | |
| POLES: 30 MAIN BREAKER AMPS: MLO | | | | | | | | | | | | | | | | | | |
| FED FROM PANEL: MAIN DISCONNECT SWITCH MANUFACTURER/TYPE: SIEMENS, SQ-D, GE | | | | | | | | | | | | | | | | | | |
| CKT | LOAD SERVED | POLE | TRIP | WIRE | COND | AMPS 'A' | AMPS 'B' | AMPS 'C' | AMPS 'A' | AMPS 'B' | AMPS 'C' | COND | WIRE | TRIP | POLE | LOAD SERVED | CKT | |
| 1 | SPARE | 3 | 60 | | | | | | 15.0 | | 15.0 | | 3/4" | 10 | 30 | 2 | TRANSFORMER TR2 | 2 |
| 3 | | | | | | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | | | SPACE | 6 |
| 7 | SPACE | | | | | | | | | | | | | | | | SPACE | 8 |
| 9 | SPACE | | | | | | | | | | | | | | | | SPACE | 10 |
| 11 | SPACE | | | | | | | | | | | | | | | | SPACE | 12 |
| 13 | SPACE | | | | | | | | | | | | | | | | SPACE | 14 |
| 15 | SPACE | | | | | | | | | | | | | | | | SPACE | 16 |
| 17 | SPACE | | | | | | | | | | | | | | | | SPACE | 18 |
| 19 | SPACE | | | | | | | | | | | | | | | | SPACE | 20 |
| 21 | SPACE | | | | | | | | | | | | | | | | SPACE | 22 |
| 23 | SPACE | | | | | | | | | | | | | | | | SPACE | 24 |
| 25 | SPACE | | | | | | | | | | | | | | | | SPACE | 26 |
| 27 | SPACE | | | | | | | | | | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | | | | | | | | | | SPACE | 30 |
| CONNECTED AMPS = | | | | | | 0.0 | 0.0 | 0.0 | 15.0 | 15.0 | 0.0 | | | | | | | |
| CONNECTED AMPS = | | | | | | 15.0 | 15.0 | 0.0 | 3.60 KVA | | | | | | | | | |

Note: (1) MAX 3% VD ON BRANCH CIRCUITS AS PER FBC
 (2) NEMA 1 ENCLOSURE

VERTICAL DATUM INFORMATION
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GENERAL NOTES AND SPECIFICATIONS:

1. THE SCOPE OF WORK SHALL CONSIST PRIMARILY OF THE FOLLOWING:
 - 1.A. PROVIDE AND INSTALL NEW SITE CONDUIT AND WIRING COMPLETE IN PLACE.
 - 1.B. PROVIDE AND INSTALL NEW GENERATOR COMPLETE IN PLACE.
 - 1.C. REMOVE EXISTING ELECTRICAL EQUIPMENT AS PER RISER DIAGRAM.
2. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO INSTALL THE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT OBVIOUSLY NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.
3. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRICAL CODE, LATEST ADOPTED NATIONAL ELECTRICAL SAFETY CODE, LOCAL CODES, CITY CODES AND THE 2020 (7TH EDITION) FLORIDA BUILDING CODE.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVALS AND TO INCLUDE ALL FEES AS PART OF HIS BID IF NOT OTHERWISE NOTED. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE ENGINEER AND OWNER.
5. THE CONTRACTOR SHALL, BEFORE SUBMITTING HIS BID, VISIT THE SITE OF THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL LOCAL UTILITIES, INCLUDING THE POWER UTILITY TO MEET ALL OF THEIR INSTALLATION REQUIREMENTS. ALL FEES, LABOR, EQUIPMENT OR MATERIALS NECESSARY TO MEET THESE REQUIREMENTS IS TO BE INCLUDED IN THE BID. THE CONTRACTOR SHALL OBTAIN, DELIVER AND INSTALL ALL CONDUITS, PULL-BOXES AND EQUIPMENT AS REQUIRED BY THE UTILITIES TO THEIR SPECIFICATIONS. POWER UTILITY REPRESENTATIVE:
7. GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH NEC, ARTICLE 250. THE GROUNDING SYSTEM TEST SHALL NOT EXCEED A 48 HOUR SPAN DRY RESISTANCE OF 10 OHMS. ADDITIONAL GROUNDING TO MEET THIS REQUIREMENT SHALL BE INSTALLED AT NO EXTRA COST. GROUNDING AND BONDING CONNECTIONS SHALL NOT BE PAINTED. ALL GROUNDING CONNECTIONS SHALL BE EXOTHERMIC UNLESS SPECIFICALLY INDICATED OTHERWISE. AN EQUIPMENT GROUND WIRE SIZED PER NEC SHALL BE PULLED IN ALL ELECTRICAL CONDUITS, POWER AND CONTROL, WHETHER OR NOT INDICATED ON THE PLANS. GROUND SURROUNDING YARD FENCE AND ALL YARD LIGHTING FIXTURES WITH MINIMUM #4 STRANDED COPPER CONDUCTORS BELOW GRADE TO SITE GROUNDING GRID PER NFPA 54/70.
8. ALL EQUIPMENT AND MATERIAL SHALL BE UNUSED AND U.L. LISTED.
9. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL SYSTEMS INSTALLED OR MODIFIED UNDER THIS PROJECT AND REPAIR OR REPLACE ALL DEFECTIVE WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER.
10. ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE.
11. COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND VERIFY ALL OBSTRUCTIONS WITH ALL SUBCONTRACTORS AND EQUIPMENT SUPPLIERS PRIOR TO ANY INSTALLATION.
12. NOT ALL CONDUITS SHOWN ON RISER AND ONE-LINE DIAGRAMS ARE SHOWN ON BUILDING OR SITE LAYOUTS. CONTRACTOR SHALL SUPPLY ALL CONDUITS AND CABLES AS SHOWN ON RISER AND ONE-LINE DIAGRAMS. THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH THE OTHER TRADES SO THAT CONFLICTS ARE AVOIDED PRIOR TO INSTALLATIONS. ALL LOCATIONS OF EQUIPMENT, PANELS ETC. ARE SHOWN FOR ILLUSTRATION PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE AND INSTALL AS SUCH WITH CORRESPONDING CONDUIT STUB-UPS. SEE OTHER DISCIPLINE DRAWINGS FOR COORDINATION OF ALL DRAWINGS. ANY CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AND MOVEMENT OF CONDUITS OR OTHER ELECTRICAL EQUIPMENT SHALL BE ACCOMPLISHED WITHOUT ANY ADDITIONAL COST FOR THE OWNER. DRAWINGS ARE SCHEMATIC AND SHOWN FOR CLARITY.
13. ALL REFERENCES TO A PARTICULAR MANUFACTURER ARE GIVEN ON AN "APPROVED EQUAL" BASIS.
14. ALL EXCAVATIONS FOR CONDUITS AND HANDHOLES, NEAR EXISTING PIPING, CONDUIT AND EQUIPMENT SHALL BE HAND EXCAVATED AND COORDINATED WITH PLANT PERSONNEL.
15. MINIMUM DEPTH FROM TOP OF DUCTBANKS OR CONDUITS TO FINISHED GRADE SHALL BE 24" UNLESS OTHERWISE NOTED.
16. CONDUCTOR PULLING TENSIONS SHALL NET EXCEED MANUFACTURER'S RECOMMENDATION. CONTRACTOR SHALL INSTALL PULL BOXES TO MEET MANUFACTURER'S REQUIREMENTS.
17. MINIMUM DISTANCE ALLOWED BETWEEN POWER CONDUITS AND INSTRUMENTATION CONDUITS SHALL BE:

| VOLTAGE | DISTANCE |
|---------|----------|
| 4160V | 3 FT |
| 480V | 2 FT |
| 120V | 1 FT |
18. PROVIDE CONDUIT DUCT SEAL AT ALL CONDUIT ENDS.
19. ALL CONDUCTORS SHALL BE XHHW-2 COPPER. NO ALUMINUM ALLOWED UNLESS SPECIFICALLY INDICATED ON DRAWINGS.
20. COLORED WARNING TAPE 6" WIDE SHALL BE INSTALLED 8" BELOW FINISHED GRADE DIRECTLY ABOVE ALL UNDERGROUND YARD CONDUITS ACCORDING TO THE FOLLOWING SCHEDULE:
POWER: RED
ALL OTHER CONDUITS: GREEN
21. FLEXIBLE CONDUITS SHALL BE USED TO TERMINATE ALL MOTORS AND OTHER VIBRATING EQUIPMENT AND SHALL BE BETWEEN 18" AND 3' IN LENGTH.
22. ALL SPARE CONDUITS SHALL BE CAPPED WITH A PVC CAP AND A NYLON PULL STRING INSTALLED WITH IDENTIFICATION ON BOTH ENDS.
23. ALL TVSS SHALL BE INTEGRAL TO THE NEW EQUIPMENT SHOWN AND SUPPLIED AS ONE UNIT AND ONE U.L. ENTITY
24. CONTRACTOR SHALL RESTORE SIDEWALKS, ROADWAYS, SOD AND SPRINKLER SYSTEM PIPING TO MATCH EXISTING, AFTER THE COMPLETION OF THE CONDUIT AND PULLBOX INSTALLATION.
25. BRANCH CIRCUITS EXCEEDING 100 FT IN LENGTH SHALL BE WIRED WITH MINIMUM #10 AWG WIRES.
26. ALL ENCLOSURES OUTDOOR SHALL BE NEMA 4X 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
27. ALL CONTROL PANELS SHALL BE CONSTRUCTED BY A UL 508A APPROVED PANEL VENDOR AND SHALL BEAR A UL 508A LABEL ON THE PANEL.
28. INSTRUMENTATION IS LOW VOLTAGE SIGNALS SUCH AS 4-20MA, TELEPHONE COMMUNICATION, FIRE ALARM COMMUNICATION. POWER CONDUIT SHALL ONLY CROSS INSTRUMENTATION CONDUIT PERPENDICULARLY AT RIGHT ANGLES WITH 6" SEPARATION.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT AND WIRING INSTALLATION FOR ALL VENDOR PROVIDED EQUIPMENT (PACKAGE SYSTEMS). IF THE SHOP DRAWINGS DIFFER FROM THE DESIGNED FACILITIES, THE CONTRACTOR SHALL REDESIGN THE FACILITIES AND SUBMIT THE REVISED DESIGN FOR THE ENGINEER'S APPROVAL ALONG WITH THE SHOP DRAWINGS. THERE SHALL BE NO ADDITIONAL COST TO THE OWNER FOR THE REDESIGN NOR FOR ANY ADDITIONAL CONDUITS AND WIRING.
30. CONTRACTOR SHALL, WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, PROVIDE TO THE BUILDING OWNER RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING A SINGLE LINE DIAGRAM OF THE ELECTRICAL DISTRIBUTION SYSTEM AND RELATED FLOOR PLANS INDICATING THE LOCATION AND AREA SERVED FOR THE DISTRIBUTION.
31. CONTRACTOR SHALL PROVIDE TO THE OWNER AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION C405.4.4.2 OF THE 2020 FLORIDA BUILDING CODE - ENERGY CONSERVATION, INCLUDING ANY AMENDMENTS THERETO.
32. BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. EXPOSED CONDUIT SHALL BE PVC SCHEDULE 80 UNLESS OTHERWISE NOTED.
33. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
34. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL DEMO MATERIAL FROM SITE AND DISPOSE OF PROPERLY.

Plot Date: 12/15/2022 4:33:29 PM Username: Steve Layout Name: E-4
Folder Path: T:\SEC 2022\522042 Chen-Moore- Cooper City Repump Station 55\Electrical Dwg5 Filename: 22-0016.00006 ELECTRICAL RISER.dwg

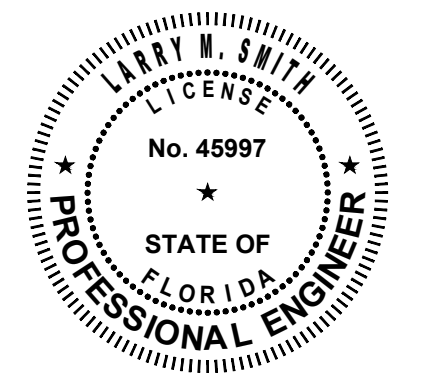
VERTICAL DATUM INFORMATION
ALL ELEVATIONS SHOWN ARE IN NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CONVERSION FACTOR:
NAVD88 + 1.60 = NGVD29 IN THIS AREA

Sunshine811
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

100% SUBMITTAL



REGISTRATION
LARRY M. SMITH, PE
REGISTRATION NO. 45997
DATE: 12/15/2022



This seal is only valid on printed copies that are dated with an original of the licensee's signature. Scanned or electronic copies are not considered signed and sealed.



CLIENT



PROJECT INFORMATION

**PUMP STATION #55
GENERATOR
REPLACEMENT**

COOPER CITY,
FLORIDA

PROJECT NUMBER
22-0016.00006

CLIENT PROJECT NUMBER

VERIFY SCALES
0 = 1"
IF NOT ONE INCH ON THIS SHEET,
ADJUST SCALES ACCORDINGLY

REVISIONS

DATE OF ISSUE
12/16/22

DESIGNED BY
SPH

DRAWN BY
SPH

CHECKED BY
LMS

DRAWING TITLE

**ELECTRICAL
GENERAL NOTES**

DRAWING NUMBER

E-4
04 OF 04

TECHNICAL SPECIFICATIONS



CITY OF COOPER CITY
LIFT STATION #55 GENERATOR
REPLACEMENT AND FORCE
MAIN BYPASS

October 2023

ENGINEER:



CHEN MOORE & ASSOCIATES
500 WEST CYPRESS CREEK ROAD – SUITE 630
FORT LAUDERDALE, FLORIDA 33309

02000 Technical Specifications

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**SECTION 01005
TECHNICAL PROVISIONS**

PART 1 - GENERAL

1.01 SCOPE

- A. Work under this contract includes furnishing materials, labor, tools, equipment, supervision and incidentals necessary to construct infrastructure improvements.

1.02 GENERAL

- A. TECHNICAL SPECIFICATIONS consists of this section, Section 01005, described as TECHNICAL PROVISIONS, pages 01005-1 to 01005-5.
- B. CITY, OWNER and CONTRACT ADMINISTRATOR are described as one in the same and used interchangeably throughout this document.

1.03 ITEMS SPECIFIED ON DRAWINGS

- A. Items of material, equipment, machinery and the like may be specified on the Drawings and not in the Technical Specifications. The CONTRACTOR shall provide such items in accordance with the General Notes on the Drawings.

1.04 FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

- A. After completion of construction, the CONTRACTOR shall provide two sets of As-Built Drawings with all the As-Built information; all locations, coordinates, dimensions and elevations of the constructed facilities, certified, signed and sealed thereon by a Professional Surveyor and Mapper per Florida Statute 472.001-472.037. All elevations shall refer to N.A.V.D. 88 (North American Vertical Datum of 1988) and all state plane coordinates shall be NAD 83 (with 1990 adjustment). The cost of such field layout and recording work shall be the responsibility of the CONTRACTOR. The As-Built utility information shall meet the requirements of Cooper City.

1.05 SALVAGE

- A. Any existing equipment or material, including but not limited to electrical systems, valves, pipes, generator, couplings, etc., which is removed as a result of construction under this project may be designated as salvage by the CITY, and if so, shall be delivered clean to the CITY at a location directed by the CONTRACT ADMINISTRATOR. Any equipment or material not worthy of salvaging shall be disposed of by the CONTRACTOR at a suitable location in accordance with all applicable regulations, ordinances and laws at no additional cost to the CITY.

1.06 POWER

- A. The CONTRACTOR shall furnish and pay for all electrical power required for the construction, testing and trial operation, prior to final acceptance by the CITY.

1.07 WATER SUPPLY

- A. All water required for construction shall be furnished by the CITY and paid for by the CONTRACTOR. The purchase price shall be the prevailing rate. The quantity of water used shall be determined by reading the meter at the start and at the finish of construction. The CONTRACTOR shall make all arrangements and incur all expense involved in having the CITY furnish and install the necessary water meters. Each water service line shall be provided with a vacuum relief or backflow preventer which shall meet the requirements of ASA A40.6, latest

**SECTION 01005
TECHNICAL PROVISIONS**

revision, and the local administrative authority.

1.08 MAINTENANCE

- A. The CONTRACTOR shall fully cooperate at all times with the CITY in order to maintain the operation of the existing sewer system with the least amount of interference and interruption possible. The schedule plans and work of the CONTRACTOR shall at all times be subject to alteration and revision if necessary for public health and safety considerations. The creation of a public nuisance will not be permitted.
- B. It may be necessary to interrupt the operation of the existing sewer system. In all cases where the CONTRACTOR must cause an interruption, CONTRACTOR shall prepare and submit to the ENGINEER four (4) working days prior to commencing the work, a complete description of the proposed procedure and a time schedule, which CONTRACTOR will be required to guarantee. At least forty-eight (48) hours prior to the time proposed for starting the work, the ENGINEER will notify the CONTRACTOR whether or not the work will be permitted as proposed.
 - 1. The ENGINEER reserves the right to require the CONTRACTOR to work 24 hours per day in all cases where, in ENGINEER'S opinion, interference with operation of the system may result in dangerous health hazards or offensive conditions.
 - 2. In no case will the CONTRACTOR be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the work are on the site. Backup equipment on key equipment items shall be required on work necessitating interference with the existing system.

1.09 SITE RESTORATION

- A. The CONTRACTOR shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basins, flagstones, rocked, graveled, or stabilized areas of driveways, and including all obstructions not specifically named herein, shall be repaired, or replaced, as determined by the ENGINEER. Site restoration shall be done in a timely manner as the work progresses.

1.10 SANITARY FACILITIES

- A. The CONTRACTOR shall provide temporary facilities at the site as directed by the ENGINEER.

1.11 STANDARDS

- A. Wherever in these TECHNICAL SPECIFICATIONS or in the drawings name and/or number refer to certain standards or regulations, the applicable publication shall be the latest revision thereof

1.12 QUALITY OF ITEMS

- A. All material furnished for this project shall be new and unused. Any material, which has become excessively weathered or damaged since manufacture, shall not be considered as new. ENGINEER shall be the sole judge as to what constitutes excessive weathering or damage.

1.13 TESTING

- A. The cost of test shall be the obligation of the CONTRACTOR and no extra charge shall be made

**SECTION 01005
TECHNICAL PROVISIONS**

to the CITY on account of such testing.

- B. The CONTRACTOR will select a recognized, independent testing laboratory to perform tests on concrete, reinforcing steel, soils and other materials for the construction phase, to determine conformity with the TECHNICAL SPECIFICATIONS. The CONTRACTOR shall supply the necessary samples for this testing without cost to the CITY. The costs for actual testing shall be paid by the CONTRACTOR.
- C. Construction in areas where installation and restoration must satisfy the additional requirements of a local, state or federal authority may require testing to demonstrate conformance. The CONTRACTOR shall ascertain the extent of testing required by regulatory agencies within these areas. The CONTRACTOR is responsible for performing such tests, including but not limited to, tests of compaction, and all costs for these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.

1.14 BASIS OF MEASUREMENT

- A. Where conduit are to be paid for on a unit price per linear foot basis, the number of linear feet will be determined by measurement along the centerline of the pipe in place, including fittings. Square yardage will be determined by the actual number of square yards installed.

1.15 CONNECTION TO EXISTING SYSTEM

- A. The CONTRACTOR shall perform all work necessary to locate, excavate and prepare for connection to the existing systems as shown on the Drawings. The cost of this work and for the actual connection to the existing system shall be based upon the unit prices.

1.16 UTILITIES

- A. Existing utilities are shown on the Drawings insofar as information is reasonably available; however, it will be the responsibility of the CONTRACTOR to preserve all existing utilities whether shown on the Drawings or not. CONTRACTOR is directed to pothole ahead of utility installation to avoid conflict and/or damage to existing facilities. If utility conflicts are encountered by the CONTRACTOR during construction, CONTRACTOR shall give sufficient notice to their owners so that they may make the necessary adjustments. Damage to any utility, which in the opinion of the CITY is caused by carelessness on the part of the CONTRACTOR shall be repaired at the expense of the CONTRACTOR.

1.17 GUARANTEE

- A. The CONTRACTOR shall guarantee the equipment, material and labor performed under the Contract against any and all failures in proper use and operation for a period of one (1) year from date of written acceptance by the CITY.
- B. The CONTRACTOR shall also obtain warranties from manufacturers for each piece of equipment furnished so that the manufacturer's warranty fully covers the equipment for a period of one (1) year from the date of written acceptance by the CITY.

1.18 PERFORMANCE OF WORK

- A. The CONTRACTOR shall provide all personnel and equipment required to complete all work specified herein and on the Drawings. In an emergency situation, if the CITY determines that it must provide staff and/or equipment to assist the CONTRACTOR in the satisfactory

**SECTION 01005
TECHNICAL PROVISIONS**

performance of the Contract terms and conditions, the CONTRACTOR at the applicable prevailing wage rates specified in CITY Ordinance shall reimburse the CITY.

- B. CONTRACTOR shall provide forty-eight (48) hours advance written notice to the CITY for approval of CONTRACTOR'S intention to work overtime on weekdays or to work on the weekends.

1.19 BARRICADING (SAFETY)

- A. The CONTRACTOR shall be responsible for the furnishing and maintaining of all required barricades, either the lighted or the reflector type, to ensure the public's safety during open trench work or for any other potentially unsafe or hazardous construction activities. Barricades shall be located and displayed in conformance with the most stringent regulations required by the governing agencies. All costs for barricading, including any permits, shall be the responsibility of the CONTRACTOR.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01005

PART 1 - GENERAL

1.01 SCOPE

- A. The WORK to be performed under this Contract shall consist of furnishing and installing all tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation, and services, including fuel, power, water, and essential communications, and performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated 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 provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.
- B. The Lift Station #55 generator replacement project Contract Documents are comprised of two volumes and are summarized as follows:

Volume I Front End Documents and Technical Specifications

Volume II General Drawings and Standard Details

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work of this Contract comprises the construction of the infrastructure site work. The work will include but not be limited to site preparation, earthwork, walkway restoration, existing fuel tank removal and generator removal, concrete work, electrical work and construction, and installation of a new generation
- B. The location of the new generator will be at City of Cooper City's public work department located at 9070 SW 51st St, Cooper City, FL 33328. The existing generator and fuel tank are located in the southeast corner of the property near the existing pump station #55 building.

1.03 NOTICE TO BIDDERS

- A. The successful bidder, in order to be considered responsive, must possess the appropriate License as described in Volume I of this document.
- B. Contractor shall have past experience with similar scale electrical utility projects for lift stations.

1.05 SITE INVESTIGATION

- A. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and all subcontractors have satisfied themselves to the nature and location of the work, the general and local conditions including, but not restricted to: those bearing upon transportation; demolition, disposal, handling and storage of materials; access roads to the site; the conformation and conditions of the work area; and the character of equipment and facilities needed preliminary to and during the performance of the work. Failure on the part of the CONTRACTOR to completely or properly evaluate the site conditions shall not be grounds for additional compensation.

1.06 WORK BY OTHERS

**SECTION 01010
SUMMARY OF WORK**

- A. Concurrent Work by Other CONTRACTORS. The CONTRACTOR'S attention is directed to the fact that other CONTRACTORS may conduct work at the site during the performance of the WORK under this Contract. The CONTRACTOR shall conduct its operations so as to cause little or no delay to 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 work under their respective contracts.

1.07 WORK SEQUENCE

- A. The CONTRACTOR shall schedule and perform the work in such a manner as to result in the least possible disruption to the public's use of roadways, driveways, and utilities. 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" and shall have obtained all required permits and permissions, CONTRACTOR shall also deliver written notice to the CITY and ENGINEER within 72 hours in advance of beginning work.

1.08 WORK SCHEDULE

- A. Time is of the essence in completing this project. Because time is of the essence the CONTRACTOR shall commit the necessary resources to this project to complete it in a timely manner. Those resources may include multiple working crews, working over time, etc. Because time is of the essence, the CONTRACTOR'S construction progress will be monitored closely on a weekly basis. The Construction progress will be measured with the construction schedule submitted by the CONTRACTOR. If the ENGINEER determines that the CONTRACTOR does not meet the CPM as specified in Section 01311, the CONTRACTOR will be required to commit those resources necessary to ensure the completion of the project in a timely manner including working overtime, adding other work crews, etc. All costs incurred to implement measure to complete the work in timely manner will be borne by the CONTRACTOR at no additional cost to the OWNER.

B. SCHEDULE

- 1. CONTRACTOR shall submit scheduling information for the work as required in Section 01311 "Schedules and Reports".
- 2. No separate payment shall be made for preparation and/or revision of the schedule.

1.09 COMPUTATION OF CONTRACT TIME

- A. It is the CONTRACTOR'S responsibility to provide clear and convincing documentation to the ENGINEER as to the effect additional work will have with respect to additional contract time extension that may be justified. If additional quantities of work can be carried out concurrent with other existing construction activities without disrupting the critical path of the project then no contract time extension will be granted. The CONTRACTOR is obligated to provide documentation to the ENGINEER if additional elements of work affect the critical path of the project. If work set forth in the original scope of the project is deleted, the contract time may be reduced. This contract is a calendar day contract. While the CONTRACTOR may be granted time to suspend work operations for vacations or holidays, contract time will not be suspended. During suspensions, the CONTRACTOR shall be responsible for all maintenance of traffic and liability without additional compensation from the CITY.

1.10 CONTRACTOR USE OF PREMISES

**SECTION 01010
SUMMARY OF WORK**

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations. The CONTRACTOR will arrange for storage of materials. A copy of an agreement for use of other property shall be furnished to the ENGINEER prior to its use.

1.11 PRE-CONSTRUCTION CONFERENCE

- A. After the award of Contract, a Pre-construction Work Conference will be held between the CONTRACTOR, the ENGINEER, the CITY, other interested Agencies, representatives of Utility Companies and others affected by the work. The ENGINEER will set the time and place of this conference. The CONTRACTOR shall bring to the conference a copy of the proposed work schedule for the approval by the ENGINEER of the proposed methods and manner of executing the work including sequences of operation and time schedule. The work shall be performed in accordance with such schedule or approved amendments thereto.

1.12 UTILITY LOCATIONS

- A. As far as possible, all existing utility lines in the project area have been shown on the plans. However, the CITY does not guarantee that all lines are shown, or that said lines are in their true location and the depicted size. It shall be the CONTRACTOR'S responsibility to identify and locate all underground or overhead utility lines or equipment affected by the project. No additional payment will be made to the CONTRACTOR because of discrepancies in actual and plan location of utilities and damages suffered as a result thereof.
- B. The CONTRACTOR shall notify each utility company involved at least thirty (30) days prior to the start of construction to arrange for positive underground location, relocation or support of its utility where that utility may be in conflict with or endangered by the proposed construction. The CONTRACTOR shall pay for relocation of utilities for the convenience of the CONTRACTOR. The CONTRACTOR shall pay for all charges by utility companies for temporary support of its utilities. All costs of permanent utility relocations to avoid conflict shall be the responsibility of the CONTRACTOR and the utility company involved.
- C. The CONTRACTOR shall schedule and coordinate their work in such a manner that they are not delayed by the utility companies relocating or supporting their utilities. No compensation will be paid to the CONTRACTOR for any loss of time or delay.
- D. All overhead, surface, and underground structures and/or utilities encountered are to be carefully protected from damage or displacement. All damage to said structures and/or utilities is to be completely repaired within a reasonable time; needless delay will not be tolerated. The CITY reserves the right to remedy any damage by ordering outside parties to make repairs at the expense of the CONTRACTOR. All repairs made by the CONTRACTOR are to be made to the satisfaction of the utility owner and shall be inspected by a representative of the utility owner and the ENGINEER.
- E. The CONTRACTOR should be aware of the Sunshine State One Call Center, which has a free locating service for CONTRACTORS and excavators. Within forty-eight hours before excavating, dial toll free 1-800-432-4770, and a locator will be dispatched to the work location. CONTRACTOR shall reasonably notify other utility companies not notified by Sunshine State One Call Center.
- F. The CONTRACTOR is responsible for compliance with any and all permit conditions.

**SECTION 01010
SUMMARY OF WORK**

- G. The CONTRACTOR shall obtain construction permit and applicable building and other permits from City jurisdictions within the project area, if required.

1.14 PROTECTION AND RESTORATION OF SURVEY MONUMENTS

- A. The CONTRACTOR shall carefully protect from disturbance all survey monuments, stakes and bench marks, whether or not established by CONTRACTOR, and shall not remove or destroy any surveying point until it has been properly witnessed by the ENGINEER. All major survey monuments that have been damaged by the CONTRACTOR such as section corners, 1/4 section corners, property corners or block control points shall be replaced at the CONTRACTOR'S expense with markers of a size and type approved by the ENGINEER. The replacement shall be under the supervision of a Professional Surveyor and Mapper per Florida Statute 472.001-472.037, where directed by the ENGINEER.

1.15 EQUIPMENT

- A. All equipment necessary and required for the proper construction of all facilities shall be on the construction site, in first-class working condition.

1.16 STORAGE SITES

- A. The CONTRACTOR shall furnish, at CONTRACTOR's expense, properly zoned areas suitable for field office, material storage and equipment service and storage. No material may be stored in the public right of way without prior authorization by the agency having jurisdiction. The CONTRACTOR shall keep these areas in a clean and orderly condition so as not to cause a nuisance or sight obstruction to motorists or pedestrians.

1.17 EXCESS MATERIAL

- A. Upon direction of the ENGINEER, all vegetation, debris, concrete or other unsuitable materials shall be disposed of in areas provided by the CONTRACTOR and approved by the ENGINEER.

1.18 AUDIO-VISUAL PRECONSTRUCTION RECORD

A. General:

1. The CONTRACTOR shall engage the services of a professional electrographer. A responsible commercial firm known to be skilled and regularly engaged in the business of preconstruction color audio-video documentation shall prepare the color audio-video DVD's.
2. Prior to beginning the work, the CONTRACTOR shall have a continuous color audio-video recording taken along the entire length of the project to serve as a record of preconstruction conditions. No construction shall begin prior to review and approval of the video covering the construction area by the ENGINEER. The ENGINEER shall have the authority to reject all or any portion of the videos not conforming to the specifications and order that it be redone at no additional charge. The CONTRACTOR shall reschedule unacceptable coverage within five days after being notified. The ENGINEER shall designate those areas, if any, to be omitted from or added to the audio-video coverage.

B. Digital Video Disk (DVD):

SECTION 01010
SUMMARY OF WORK

1. DVD's shall be new. Reprocessed DVD's will not be acceptable. They shall be interchangeable with the color DVD player and shall be compatible for playback with a standard player-receiver, DVD format. Any other format must be approved by ENGINEER.
2. CONTRACTOR shall provide the ENGINEER and the CITY with one complete set of DVD's for each project area.

C. Equipment:

1. All equipment, accessories, materials and labor to perform this service shall be furnished by the CONTRACTOR.
2. The total audio-video system shall reproduce bright, sharp, clear pictures with accurate colors and shall be free from distortion, tearing, rolls or any other form of imperfection. The audio portion of the recording shall reproduce the commentary of the camera operator with proper volume and clarity and be free from distortion and interruptions.
3. The color video camera used in the recording system shall have a horizontal resolution of 300 lines at center, a luminance signal to noise ratio of 45 dB and a minimum illumination requirement of 25 foot-candles.

D. Recorded Information - Audio

1. Each DVD shall begin with the current date, project name and municipality and be followed by the general location, i.e., name of street, house address, viewing side and direction of progress. The audio track shall consist of an original live recording. The recording shall contain the narrative commentary of the electrographer, recorded simultaneously with the electrographer's fixed elevation video record of the zone of influence of construction.

E. Recorded Information - Video

1. All video recordings must, by electronic means, display continuously and simultaneously generated with the actual transparent digital information to include the date and time of recording, and station numbers as shown on the drawings. The date information shall contain the month, day and year. The time information shall contain the hour, minutes and seconds. Additional information shall be displayed periodically. Such information shall include, but not be limited to, project name, contract number, name of street, house address, direction of travel and the viewing side. This transparent information shall appear on the extreme upper left hand third of the screen.
2. All video recording shall be done during times of good visibility. No video recording shall be done during precipitation, mist or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.
3. The rate of speed of the vehicle used during video recording shall not exceed 10 miles per hour. Panning, zoom-in and zoom-out rates shall be sufficiently controlled to maintain a clear view of the object.
4. DVD coverage shall include all surface features located within the zone influence of construction supported by appropriate audio coverage. Such coverage shall include, but

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not be limited to, existing driveways, sidewalks, curbs, pavements, ditches, mailboxes, landscaping, culverts, fences, signs and headwalls within the area covered.

F. Payment:

1. Compensation for the audio-video preconstruction record shall be included in the lump sum price bid for Mobilization.

1.22 ENVIRONMENTAL PROTECTION

- A. The CONTRACTOR shall furnish all labor and equipment and perform all work required for the prevention of environmental pollution during and as a result of the work under this contract. For the purpose of this contract, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life, affect other species of importance to humankind, or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, land and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants. Environmental pollution prevention shall be in accordance with NPDES requirements with no additional cost to the CITY.
- B. The CONTRACTOR shall take all steps necessary to protect water quality in the connected waters around the project and shall utilize such additional measures as directed by the ENGINEER. Silt screens adjacent to outfall construction shall not be removed until the turbidity of the affected waters is equal to or lower than the ambient turbidity of undisturbed segments of the surface water body. Any discharge into existing drainage facilities shall require the approval of the owner of the system. This may require the CONTRACTOR to obtain an engineered plan to be furnished at no additional cost to the CITY.

1.23 MAINTENANCE AND PROTECTION OF TRAFFIC

- A. The CONTRACTOR shall provide all necessary traffic control devices in order to redirect, protect, warn or maintain existing vehicular and pedestrian traffic during the course of construction.
- B. TRAFFIC CONTROL
 1. The CONTRACTOR, at all times, shall conduct the work in such a manner as to insure the least obstruction to traffic as is practical. Convenience of the general public and of the residents adjacent to the work shall be provided for in a satisfactory manner, as determined by the ENGINEER.
 2. The CONTRACTOR shall furnish a sufficient number of protective devices 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 provides the necessary protection.

1.25 BASIS OF PAYMENT

1.26 APPLICATION FOR PAYMENT FOR STORED MATERIALS

- A. Application for payment for stored materials may not be made by the CONTRACTOR.

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1.27 SPECIAL CONDITIONS FOR CONSTRUCTION BY OTHER AGENCIES

- A. It will be the CONTRACTOR'S responsibility to coordinate construction schedules with other contractors so as to minimize disruptions, and inconveniences. The project site shall be safe at all times for construction workers and residents.

END OF SECTION 01010

PART 1 - GENERAL

1.01 SCOPE

- A. Payment for various items of the Item Response Form, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor operations and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Item Response Form, and all costs therefore shall be included in the prices named in the Item Response Form for the various appurtenances needed to complete the items of work.
- B. Payment for the various items of the Item Response Form shall constitute full compensation for CONTRACTOR's superintendent at the job site full-time during construction, for furnishing and installing all work, including generator, concrete restoration, conduits, wire, electrical panel, all earthwork, trench excavation as shown on the Drawings, removal and disposal of waste, unsuitable and excess material, and restoration of all improvements incidental to construction for which there are no other bid items;. No additional payment will be made for performing required tests and the furnishing of accurate as-builts.
- C. Payment for all bid items shall constitute full compensation for the complete installation of each bid item. The work shall include all bid items to be completed, tested and ready for acceptance by the appropriate government agency.
- D. No separate payment for pavement restoration will be made unless specifically shown on the plans, called out in the Item Response Form, or directed by the ENGINEER.

1.02 REMOVE AND DISPOSE OF EXISTING ELECTRICAL SYSTEM (ITEM # 1)

- A. Measurement and payment for removing and disposing of existing electrical system will be based upon a lump sum price of the full removal of all existing components of the existing generator system as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for removing and disposing of existing electrical system will be made at the lump some price and detailed on the drawings which price shall constitute full removal of all components of the existing generator, fuel tank, electrical panel, generator breaker panel, existing generator day tank, fuel tank piping, mounting hardware, wires, and conduit.
- C. Contractor is responsible of obtaining all necessary permits including any environmental fees and work to remove existing fuel systems.

1.03 REMOVE AND DISPOSE OF EXISTING CONCRETE SIDEWALK (ITEM # 2)

- A. Measurement for payment to remove and dispose of existing concrete sidewalk will be based upon the actual number of square yards of such concrete sidewalk actually removed, all in accordance with the Contract Documents.

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- B. Payment for removal and disposal of existing concrete sidewalk will be made at the unit price per square yard of concrete sidewalk named in the Item Response Form which price shall constitute full compensation for saw cutting (as necessary), the removal and disposal of such concrete sidewalk. Thickness of existing concrete sidewalk may vary, removal will be paid at the square yard cost, no additional compensation will be made for thickness.
- 1.04 REMOVE EXISTING FUEL CONTAINMENT STRUCTURE (ITEM # 3)
- A. Measurement for payment to remove the existing concrete fuel containment structure will be based upon a lump sum unit price for the removal of the entire existing concrete fuel containment structure, all in accordance with the Contract Documents.
- B. Payment to remove the existing concrete fuel containment structure will be made at the unit lump sum price named in the Item Response form which price shall constitute full compensation for the removal of the existing concrete walls and base pad of the structure. Concrete shall be removed in complete and will include but is not limited to the removal of all foundation, footers, cutting of wall, rebar removal, and rebar grinding.
- C. Inclusive of temporary wall or barrier to be installed following wall removal to ensure environmental security in walled area prior to removal of existing fuel tank.
- D. This item also includes removal and disposal of the existing fuel tank and fuel lines that connect the generator to the fuel tank.
- 1.05 CONCRETE SIDEWALK RESTORATION (ITEM # 4)
- A. Measurement and payment for concrete sidewalk restoration will be based upon the actual number of square yards of such sidewalks constructed as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for concrete sidewalk restoration will be made at the unit price per square yard and detailed on the drawings which price shall constitute full compensation for completing said work, including removing and disposing of existing concrete sidewalk, all earthwork, compaction of subgrade, backfilling of sidewalk, construction of the 4 - 6 inch thick concrete sidewalk, furnishing and setting for expansion joint material, furnishing and installing 1 inch PVC sleeve for existing irrigation connections as directed by ENGINEER, disposal of excess material, restoration/replacement of sod disturbed to equal condition as existing, and the appurtenant items for which separate payment is not specifically included in the Item Response Form.
- 1.06 FURNISH AND INSTALL 24-INCH CONCRETE GENERATOR PAD (ITEM # 5)
- A. Measurement and payment for furnishing and installing a 24-inch concrete generator pad will be based upon a lump sum price for the installation of the concrete pad as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing a 24-inch concrete generator pad will be based upon a lump sum price for the installation of the concrete pad and detailed on the drawings which price shall constitute full compensation for completing said work, including all fill required to meet detail requirements, earthwork, compaction of subgrade, backfilling, construction of the 24- inch thick concrete pad, construction of footings, installation of connection points to the proposed generator, furnishing and setting for expansion joint material, furnishing and installing all necessary reinforcement, any Dowling and connecting to existing concrete slab, disposal of excess material, restoration/replacement of sod disturbed to equal condition as existing, and the

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appurtenant items for which separate payment is not specifically included in the Item Response Form.

1.07 FURNISH AND INSTALL SOD (ITEM # 6)

- A. Measurement for payment for furnishing and installing sod will be based upon the number of square yards of sod actually installed, all in accordance with the requirements of the Contract Documents.
- B. Payment for sod will be made at the unit price per square yard of sod and shall constitute full compensation for furnishing and installing the sod matching existing type and maintaining sod for 30 days. No additional compensations will be made for the type of sod installed or watering and maintaining sod for 30 days after installation.

1.08 EXISTING IRRIGATION SYSTEM RESTORATION (ITEM # 7)

- A. Measurement for payment for irrigation system restoration will be based upon a lump sum price for the restoration of the existing irrigation system. As such, the actual quantity may not equal the estimated quantity and no additional compensation will be granted.
- B. Irrigation systems shall be restored with coverage matching that prior to construction, pipe and sprinklers matching the size and type of the existing pipe and sprinkler heads, and necessary adapters, coupling at each end splicing the restored pipe in place and connecting to existing sleeves underneath the sidewalk. If irrigation system is to be partially abandoned, then that which is being abandoned shall be removed, and the remaining exposed pipes shall be capped and protected. All work shall meet the approval of the ENGINEER.

1.09 FURINSH AND INSTALL P401 DIP FORCE MAIN (ITEM # 8 & 9)

- A. Measurement for payment for furnishing and installing force main pipe will be based upon the number of linear feet of such pipe actually constructed as determined by measurement along the centerline of the pipe in place at 36 inches minimum cover or more to avoid other underground utilities.
- B. Payment for furnishing and installing force main pipe will be made at the unit price per linear foot of pipe complete and in place including all clearing and grubbing, remove and stockpile limerock, pipe, connections to existing pipe, unloading, sheeting, excavation, trench protection and trench safety, dewatering, laying, backfilling, compaction, pressure testing, flushing and temporary blow off with full cannon. As-builts for newly installed force mains must be provided before compensation for said force main will be approved.

1.10 FURNISH AND INSTALL 12" PLUG VALVE (ITEM # 10)

- A. Measurement for payment to furnish and install plug valves will be based upon actual quantity, each, of such plug valves furnished and installed, all in accordance with the requirements of the Contract Documents. Test valves will not be compensated for under this line item.
- B. Payment for furnishing and installing plug valves will be made at the unit price, each, which price shall constitute full compensation for the completed installation of the valve, including valve, valve box and extension to surface, 2 inch brass ID disk with all restrain glands. No additional compensation will be granted for installation of side mounted valves as directed by the Engineer.

1.11 FURNISH AND INSTALL 12" CHECK VALVE (ITEM # 11)

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- A. Measurement for payment to furnish and install check valves will be based upon actual quantity, each, of such check valves furnished and installed, all in accordance with the requirements of the Contract Documents.
 - B. Payment for furnishing and installing check valves will be made at the unit price, each, of check valve, excavation, dewatering, any form and amount of shoring, backfill and compaction, rock bedding for structure, epoxy coating, testing, and construction of the reinforced concrete structure with ring and cover.
- 1.12 FURNISH AND INSTALL FORCE MAIN FITTINGS (ITEM # 12)
- A. Measurement for payment to furnish and install force main fittings, unless specifically listed separately, shall be at the unit bid price per ton for such fittings, including but not limited to crosses, tees, bends and elbows of all angles and radius, concentric and eccentric reducers, offsets, wyes, true wyes, sleeves, plugs, caps, restraining glands and gaskets, base bends, base tees, reducing flanges, mega lugs, fillers and connecting pieces, furnished all in accordance with the Contract Documents.
 - B. Payment for furnishing and installing force main fittings complete and in place shall be at the unit bid price per ton and shall include furnishing, storing, transporting and installing the fittings.
- 1.13 CONNECT TO EXISTING FORCE MAIN (ITEM # 13)
- A. Measurement and payment for performing all connections to existing force mains will be based on the actual quantity, each, of such connection made all in accordance with the Contract Documents.
 - B. Payment for connecting to existing force main shall be made at the unit price, each, which shall constitute full compensation for all materials (regardless of size) and labor needed to complete connection which shall include but is not limited to valves, fittings, spool pieces, corporation stops, saw cutting, removal and disposal of existing piping and fittings to prepare for connection and filling and flushing of main. All coordination needed for force main shut offs shall be responsibility of the CONTRACTOR and is included in the scope of this item.
- 1.14 FURNISH AND INSTALL 12 INCH X 12 INCH TAPPING SLEEVE AND VALVE (ITEM # 14)
- A. Measurement for payment to furnish and install tapping sleeve and valve will be based upon the actual quantity, each, of such connections made all in accordance with the contract documents.
 - B. Payment for furnishing and installing tapping sleeve and valve shall be made at the unit price, each, which shall constitute full compensation for all materials (regardless of force main size) and labor needed to complete connection which shall include but is not limited to valves, fittings, spool pieces, corporation stops, removal and disposal of existing piping and fittings to prepare for connection and filling and flushing of main.
- 1.15 FURNISH AND ISNTALL 400KW GENERATOR IN OUTDOOR ENCLSURE & 2,500 GALLON FUEL TANK (ITEM # 15)
- A. Measurement for payment for furnish and installing 400 KW generator in outdoor enclosure and fuel tank will be based upon a lump sum price all in accordance with the Contract Documents.
 - B. Payment for furnishing and installing 400 KW generator in outdoor enclosure will be based upon

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a lump sum price for furnishing and install as detailed on the drawings which price shall constitute full compensation for completing said work, including all connecting generator to concrete pad, material and labor to install electrical system, necessary permits, inspections, grounding, record drawings.

- C. Fuel tank shall be 2,500 gallons. All work to connect fuel tank to generator shall be included in this line item.

1.16 FURNISH AND INSTALL CONDUIT & WIRE (ITEM # 16)

- A. Measurement and payment for furnishing and installing conduit & wire will be based upon a lump sum price for the installation of all wire and conduit for the new generator and connection to existing systems as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing conduit & wire will be made at the lump sum for all work detailed on the drawings which price shall constitute full compensation for completing said work, including excavation, concrete coring, concrete wall patching, obtaining all permits and inspections, conduits, pull-boxes, grounding, testing, cables, backfilling, compaction, conduit duct seal, and other material and labor not shown but obviously necessary for completion of the work.

1.17 Furnish and Install New Electrical Panel 'H' (ITEM # 17)

- A. Measurement and payment for furnishing and installing new electrical panel 'H' will be based upon a lump sum price for the installation of the electrical panel as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and install new Electrical Panel 'H' will be made at the lump sum price for all work detail on the drawings which price shall constitute full compensation for completing said work, including mounting panel, electrical wire improvements and/or extensions, junction boxes, splicing necessary wires, testing, and other material and labor not shown but obviously necessary for completion of the work.

1.18 MISCELLANEOUS ELECTRICAL MATERIALS (ITEM # 18)

- A. Measurement for payment for Miscellaneous Electrical Materials will be based on a lump sum price and include all materials not described or shown in the Contract Documents.

1.19 RELOCATE EXISTING LIFT STATION #01 ELECTRICAL SERVICE TO PUMP STATION MCC (ITEM #19)

- A. Measurement and payment to relocate existing lift station #01 electrical service to the pump station MCC will be based upon a lump sum price for the installation of all wire and conduit for the relocation as shown in the drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment to relocate existing lift station #01 electrical service to the pump station MCC will be made at the lump sum for all work detailed on the drawings which price shall constitute full compensation for completing said work, including excavation, concrete coring, concrete wall patching, obtaining all permits and inspections, conduits, pull-boxes, grounding, testing, cables, backfilling, compaction, conduit duct seal, and other material and labor not shown but obviously necessary for completion of the work.

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1.20 MOBILIZATION (ITEM # 20)

- A. See Section 01505, "Mobilization" for payment limitations.
- B. Payment for mobilization will be made at the lump sum price. An initial lump sum partial payment of 40% of the Mobilization bid item amount shall be made upon completion of items #1-10 as outlined in Section 01505 Paragraph 1.01A. Payment of the remaining 60% for mobilization will be made in equal monthly lump sum amounts for the duration of the original contract time.

1.21 MAINTENANCE OF TRAFFIC (ITEM # 21)

- A. See Section 01570 "Traffic Regulations" and all other references to traffic control and maintenance in this document and any regulatory requirements.
- B. Payment for maintenance of traffic will be made at the lump sum price named in the Item Response Form. Payment for maintenance of traffic will be made in equal monthly lump sum amounts for the duration of the original contract time.

1.22 PERFORMANCE AND PAYMENT GUARANTY AND INSURANCE (ITEM # 22)

- A. Payment for Performance and Payment Guarantee and Insurance will be made at the lump sum price named in the Item Response Form. The CONTRACTOR may request payment for this bid item after the Initial Notice to Proceed has been issued.
- B. Performance and Payment Guarantee and Insurance are limited to 3% of the Total Bid Price. Any amount in excess of 3% will be moved to Line-Item No. 3. However, the total bid amount will not change. The 3% ceiling on Performance and Payment Guarantee and Insurance is not responsiveness, just an instruction on the amount the CITY will pay for Performance and Payment Guarantee Insurance.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01025

SECTION 01060
REGULATORY REQUIREMENTS & PERMITS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall comply with all building codes appropriate to the project, including those of:
 - 1. National Electric Code.
 - 2. Florida Building Code. (Latest Revision)
- B. CONTRACTOR shall comply with these codes, laws, regulations, rules, directives of all agencies, boards, districts, and governmental bodies having jurisdiction.
- C. CONTRACTOR shall obtain and pay the cost of all building permits, fees, tie-in or connection charges associated with the project.
- D. Any and all engineering permits listed below have been or are being obtained from the corresponding agencies by the CITY. The CONTRACTOR is responsible for compliance with any and all permit conditions. In the event that the CITY must obtain permits in addition to those listed below, the CONTRACTOR shall not have any claim for damages arising from any delay caused by the CITY obtaining said additional permits.
 - 1. Broward County Environmental Permitting Division – Construction of Domestic Wastewater License
- E. The CONTRACTOR shall obtain a construction permit and applicable building and all other permits from the CITY, county, state, and jurisdictions within the project area, if required.
- F. Contractor is responsible for applying for a tank modification permit with Broward County/FDEP prior to removing existing 1,000 gallon above ground fuel tank and installing new 2,500 gallon tank. The contractor will also be required to register new tank with FDEP once installed.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01060

SECTION 01090
REFERENCE STANDARDS

PART 1 GENERAL

1.01 GENERAL

- 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 that the WORK is advertised for 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 applicable codes and the applicable requirements of the following documents.
- B. References herein to "Building Code" shall mean "Florida Building Code". References to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for 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 furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.
- D. 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.

SECTION 01090
REFERENCE STANDARDS

- E. Applicable Standard Specifications: References in the Contract Documents to "Standard Specifications" or SSPWC shall mean the Standard Specifications for Public Works Construction, 1991 Edition.
- F. 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.
- G. 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.

1.03 REGULATIONS RELATED TO HAZARDOUS MATERIALS

- A. The CONTRACTOR is responsible that all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.
- B. Where no specific regulations exist, all chemical, hazardous, and petroleum product piping and storage in underground locations must be installed with double containment piping and tanks, or in separate concrete trenches and vaults, or with an approved lining which cannot be penetrated by the chemicals, unless waived in writing by the OWNER.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01090

**SECTION 01152
APPLICATIONS FOR PAYMENT**

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit Applications for Payment to OWNER in accordance with the schedule established by Conditions of the Contract and Agreement between OWNER and CONTRACTOR.

1.02 RELATED REQUIREMENTS

- A. Contract between OWNER and CONTRACTOR: Progress Payments, Retainage and Final Payment.
- B. All applicable sections of the Specifications.

1.03 FORMAT AND DATE REQUIRED

- A. Submit itemized applications typed on AIA Document G702, Application and Certificate for Payment, and continuation sheet G702A or equivalent.

1.04 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of Contract firm.
- B. Continuation Sheets:
 - 1. Fill in total list of all scheduled component items of work, with item number and scheduled dollar value for each item.
 - 2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored.
 - a. Round off values to nearest dollar, or as specified for Schedule of Values.
 - 3. List each Change Order executed prior to date of submission, at the end of the continuation sheets.
 - a. List by Change Order Number, and description, as for an original component item of work.

1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the OWNER or the OWNER's Representative requires substantiating data, CONTRACTOR shall submit suitable information, with a cover letter identifying:
 - 1. Project.

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APPLICATIONS FOR PAYMENT**

2. Application number and date.
 3. Detailed list of enclosures.
- B. Submit one copy of data and cover letter for each copy of application.
- 1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT
- A. Fill in Application form as specified for progress payments.
 - B. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700 Contract Closeout.
- 1.07 SUBMITTAL PROCEDURE
- A. Submit Applications for Payment to OWNER at the times stipulated in the Agreement.
 - B. When OWNER finds Application properly completed and correct, OWNER will transmit a copy of the certificate for payment to the CONTRACTOR.
- 1.08 PROGRESS AS-BUILT DRAWING INFORMATION
- A. Submit with each progress payment application progress as-built drawing information current to the date of the submittal date with verification by the OWNER's Representative. As-builts shall be submitted with both digital and hard copies. See section 01720 for details.
- 1.09 OTHER PROVISIONS
- A. The CONTRACTOR shall not be permitted to invoice for quantities of work beyond those contained in the contract and all previously approved change orders. Invoice for partial payment shall not be accepted by OWNER as complete without the following:
 1. Certificate of payment to subcontractors.
 2. Updated Construction Schedule: Five hard copies and one electronic copy.
 3. As-Built Drawings are to be in accordance with Part 1.08 of this Section.
 4. Construction schedule progress report in accordance with Section 01311.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01152

**SECTION 01311
SCHEDULES AND REPORTS**

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Work under this Contract shall be planned, scheduled, executed, reported and accomplished using the Critical Path Method (hereinafter referred to as CPM), in calendar days, unless otherwise specifically provided in the Contract Documents.
- B. The primary objectives of the CPM scheduling requirements are: (1) to insure adequate planning and execution of the Work by CONTRACTOR; (2) to assist Owner in evaluating progress of the Work; (3) to provide for optimum coordination by CONTRACTOR of their trades, Subcontractors and Suppliers, and of their Work with the work or services provided by any separate Contractors; (4) to permit the timely prediction or detection of events or occurrences which may affect the timely prosecution of the Work; and (5) to provide a mechanism or tool for use by the Owner, ENGINEER and CONTRACTOR in determining and monitoring any actions of the CONTRACTOR which may be required in order to comply with the requirements of the Contract Documents relating to the completion of the various portions of the Work by the Specific Dates specified in the Contract Documents.
- C. CONTRACTOR is responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques and procedures to be employed. The construction Schedule shall represent the CONTRACTOR's best judgment of how they will prosecute the Work in compliance with the Contract requirements. CONTRACTOR shall ensure that the Construction Schedule is current and accurate and is properly and timely monitored, updated and revised as Project conditions and the Contract Documents may require.
- D. CONTRACTOR shall consult with their principal Subcontractors and Suppliers relating to the preparation of their construction plan and Construction Schedule. Principal Subcontractors and CBE Subcontractors shall receive copies of those portions of CONTRACTOR's Construction Schedule, which relate to their work and shall be continually advised of any updates or revisions to the Construction Schedule as the Work progresses. When CONTRACTOR submits their Construction Schedule to the Owner or makes any proposed updates or revisions to such Schedule, CONTRACTOR shall consult with and obtain the concurrence of their CBE and principal Subcontractors and Suppliers. Tasks to be performed by CBE Subcontractors must be clearly noted on the schedule. CONTRACTOR shall be solely responsible for ensuring that all Subcontractors and Suppliers comply with the requirements of the Construction Schedule for their portions of the Work.
- E. CONTRACTOR will provide the basic data relating to activities, durations and sequences of construction and shall develop and deliver to the Owner and ENGINEER the draft of the Construction Schedule. This data shall reflect the CONTRACTOR's actual construction plan for the Project, and shall fully comply with all requirements of the Contract Documents.
- F. When there are separate Contractors working concurrently on the Project whose work must interface or be coordinated with the work of separate contractors, CONTRACTOR shall coordinate their activities with the activities of the separate Contractors and shall, prior to the submission of their Construction Schedule to the Owner and ENGINEER, obtain written approval of their Construction Schedule by the separate Contractors. If CONTRACTOR is unable to obtain such written approval by the separate Contractors after their best efforts to do so, or if a conflict occurs that cannot be resolved by mutual agreement between CONTRACTOR and any separate CONTRACTOR, the Owner shall make a determination of the schedule, which shall be binding upon CONTRACTOR and the separate Contractors.

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- G. The CONTRACTOR shall be responsible for providing the services required for the basic drafting and computerization of CONTRACTOR's data for CONTRACTOR's initial Construction Schedule, in accordance with the requirements of this Contract. The CONTRACTOR shall use Primavera Suretrack, Project Manager 3 or approved equal computer program for development and maintenance of the schedule.
- H. To carry out the intent of this Section, CONTRACTOR agrees that the orientation session, as described in Subparagraph 1.02-B, shall not be grounds for any claim by CONTRACTOR or any of their Subcontractors or Sub-Subcontractors of alleged interference, lack of cooperation, delay disruption, negligence or hindrance by Owner or ENGINEER, and CONTRACTOR covenants not to sue therefore.
- I. It is understood and agreed that the Construction Schedule is to represent CONTRACTOR's best plan and estimate for the Work; however, CONTRACTOR acknowledges that the Construction Schedule may have to be revised from time-to-time as progress proceeds. CONTRACTOR further acknowledges and agrees that the Owner does not guarantee that: (1) CONTRACTOR can start work activities on the "early start" or "late start" dates or complete work activities on the "early finish" or "late finish" dates shown in the schedule, or as same may be updated or revised; (2) CONTRACTOR can proceed at all times in the sequence established by the utilization of only the resources and labor they initially plans for the performance of the work; (3) CONTRACTOR's Construction Schedule will not have to be modified in order to obtain the agreement of any separate Contractors to the schedule; or (4) CONTRACTOR's Construction Schedule will not have to be modified or changed by direction of the Owner. Any changes, modifications or adjustments made by CONTRACTOR to the Construction Schedule shall be in full compliance with all requirements of the Contract Documents.
- J. The CONTRACTOR acknowledges and agrees that their Construction Schedule must be flexible in order to accommodate and allow for their coordination with the operations of the Owner and the work of separate contractors relating to the Project. The Owner and ENGINEER will review the CONTRACTOR's Construction Schedule for compatibility with Owner operations and the work of separate contractors. CONTRACTOR agrees to hold meetings with the Owner, ENGINEER and separate contractors to resolve any conflicts between CONTRACTOR's Construction Schedule and the operations of the Owner or work of separate contractors. CONTRACTOR agrees to fully cooperate with Owner and separate contractors to resolve such conflicts and to revise their Construction Schedule as reasonably required.
- K. In order to maintain the orderly progress of the work performed on the Project, the Owner shall have the right to determine, in their sole discretion, the priority between the Work performed by CONTRACTOR and the work of any separate contractors or Owner's operations; this decision shall be final and binding and shall not be a cause for extra compensation or an extension of time, except where an extension of time is granted because of a delay for which CONTRACTOR is otherwise entitled to an extension under the Contract Documents. Provided, however, that this right shall not be exercised by the Owner unless: (1) the determination is necessary, in the opinion of the Owner, because of Project conditions; and (2) CONTRACTOR and any separate contractors cannot otherwise agree upon such priority of schedule construed as relieving the CONTRACTOR of their obligation to cooperate with any separate contractors on the Project.
- L. If CONTRACTOR's Construction Schedule indicates that Owner or a separate CONTRACTOR is to complete an activity or perform certain preceding work by a particular date, or within a certain duration, Owner or any separate contractor shall not be bound to said date or duration unless Owner expressly and specifically agrees in writing to same. The review and approval or acceptance by Owner of the Construction Schedule or any other schedule or plan of

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construction of CONTRACTOR, does not constitute an agreement by Owner of any start or finish date in the schedule or specific durations or sequences for activities of the Owner or any separate contractor; provided, however, that nothing herein shall be construed as modifying or changing, or excusing the performance of CONTRACTOR of required portions of the Work by the Specific Dates as set forth in the Contract Documents.

- M. The Specific Dates set forth in the Contract Documents represent only the major items of Work and may include interface dates with the operations of the Owner, the work of separate contractors or others. Specific Dates are Contract requirements and are of the essence to this Contract and to the coordination of the Work by CONTRACTOR. Specific Dates represent the latest allowable start or completion time for those portions of the Work to which each Specific Date relates. The Specific Dates are not intended to be a complete listing of all Work under this Contract or of all interfaces with work performed by other separate contractors, the Owner or others. CONTRACTOR shall determine the time requirements for all such interfaces and shall be responsible for planning, scheduling and coordinating the Work in order to complete in accordance with those requirements.
- N. It is understood and agreed that should the Owner and ENGINEER provide CONTRACTOR, at CONTRACTOR's request, with any services, advice or counsel relating to the scheduling or coordination of the Work or any other matter that: (1) Owner and ENGINEER shall not be liable to CONTRACTOR for any errors, omissions, negligence or deficiencies which may in any way occur because of same; (2) such services, advice or counsel are provided solely as aids in the development by CONTRACTOR of a representation of CONTRACTOR's actual construction plan and schedule in accordance with the requirements of the Contract Documents, and Owner and ENGINEER shall not be liable to CONTRACTOR should CONTRACTOR rely on such services, advice or counsel to their detriment; (3) such services, advice or counsel shall not relieve CONTRACTOR of any responsibility under the Contract for all construction means, methods, techniques, coordinating all portions of the Work; and (4) any services provided by the Owner and ENGINEER or the lack or alleged untimeliness thereof will not in any way take the place of or relieve the CONTRACTOR of full responsibility for compliance with all requirements of the Contract Documents, including, but not limited to the obligation to complete the Work within the Specific Dates set forth in Contract Documents.
- O. Approval or acceptance by the Owner of the CONTRACTOR's Construction Schedule, or any revisions or updates thereto, is advisory only and shall not relieve the CONTRACTOR of the responsibility for accomplishing each portion of the Work within each and every applicable Specific Date. Omissions and errors in the approved or accepted Construction Schedule, or any revisions or updates shall not excuse performance, which is not in compliance with the Contract. Approval by the Owner in no way makes the Owner an insurer of the reliability, accuracy or feasibility of the Construction Schedule nor liable for time or cost overruns flowing from such omissions or errors. It is understood and agreed that CONTRACTOR cannot rely upon any informal or constructive acquiescence or approval of the Construction Schedule by Owner has any right or power to agree to any schedule commitment or obligation on the part of Owner except as set forth expressly in the Contract Documents.
- P. Should CONTRACTOR intend or plan to complete the Work, or any portion thereof, earlier than any applicable Specific Date or the Contract Time, CONTRACTOR shall give timely and reasonable notice of this fact to Owner and ENGINEER. Owner shall have the sole discretion to agree to or reject such early completion plan by CONTRACTOR. Owner shall have no duty or obligation to agree to, or to cooperate with CONTRACTOR regarding any early completion plan or proposal by CONTRACTOR and shall not be liable for any damages of CONTRACTOR because of the rejection by Owner of said plan.

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- Q. Unless otherwise specifically provided in the Contract Documents, CONTRACTOR acknowledges that Owner has contemplated in Owner's planning and approval of the schedule, and in Owner's budgeting for professional services, that the Work will be performed on a 5-day work week basis, utilizing a single 8-hour shift per day. Owner shall have the sole discretion of approving or rejecting a variance in the workweek, number of shifts, or shift length. Unless otherwise agreed by Owner, CONTRACTOR shall bear the cost of, and pay the Owner, for additional staff and supervisory personnel, including but not limited to the services of ENGINEER necessary to support any variance in the contemplated work week, number of shifts or shift length.

1.02 POST AWARD ACTIVITIES

- A. Upon receipt by CONTRACTOR of the Notice to Proceed, and until the Construction Schedule is approved by the Owner, CONTRACTOR shall proceed with CONTRACTOR's Work in accordance with the Provisional Preliminary Network of CONTRACTOR which was included as part of the CONTRACTOR's bid.
- B. Orientation Session: CONTRACTOR shall, upon notification from the Owner, attend an orientation session relating to the Schedules and Reports requirements for this Project. This orientation meeting is designed to assist the CONTRACTOR in planning the Work and in developing the Construction Schedule. This session will normally be held within three (3) days after the date of the Notice to Proceed or the Notice of Award of Contract by Owner (whichever occurs first) and will be conducted by the Owner. CONTRACTOR shall arrange for CONTRACTOR's project manager and Superintendent, major Subcontractors and Suppliers, and any scheduling engineers that CONTRACTOR may employ to attend the orientation session.
- C. Among other things, the Owner and ENGINEER will review: the objectives of the Schedules and Reports requirements; the procedures and requirements for the preparation of the Construction Schedule and Schedule of Values by CONTRACTOR; how the requirements of the Contract Documents will be monitored and enforced by the Owner; long-lead items and time requirements for work by Subcontractors will be identified. It is understood and agreed that the ENGINEER has no authority to waive any requirements of the Contract Documents at this orientation meeting, and all requirements of the Contract Documents remain applicable to CONTRACTOR's work whether or not discussed at this session.
- D. Should CONTRACTOR or CONTRACTOR's principal Subcontractors and Suppliers fail or refuse to attend this orientation session, Owner shall have the right to terminate CONTRACTOR for default pursuant to the provisions of the General Contracts.

1.03 DRAFT OF CONSTRUCTION SCHEDULE

- A. Within fifteen (15) days of the orientation session, (even though CONTRACTOR may not have completed subcontractor negotiations and executed subcontracts) the CONTRACTOR, in consultation with the Owner and ENGINEER, shall complete a draft of CONTRACTOR's time-scaled network graphic and work schedule.
1. Except for procurement requirements, CONTRACTOR shall differentiate activities of the Schedule so that no single activity shown has a duration longer than fourteen (14) calendar days, unless the Owner, in Owner's sole discretion, shall approve a longer duration for certain activities.
 2. The Construction Schedule shall represent the CONTRACTOR's best judgment and intended plan for completion of the Work in compliance with Specific Dates listed in the

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Contract Documents and the Contract Time. The Construction Schedule shall take into account all foreseeable activities to be accomplished by any separate contractors, and interface dates with utility owners, the Owner's operations and others. The Construction Schedule shall anticipate all necessary labor and resources to accomplish the activities within the durations set forth in the Construction Schedule.

- B. Owner shall have seven (7) days to approve the draft schedule information and shall have the right to require the CONTRACTOR to modify any CONTRACTOR data or any portion of the CONTRACTOR's Construction Schedule, Schedule of Values or Recovery Schedule, as herein required, with CONTRACTOR bearing the expense thereof, which the Owner reasonably determines to be: (1) impracticable; (2) based upon erroneous calculations or estimates; (3) unreasonable; (4) required in order to ensure proper coordination by CONTRACTOR of the work of their Subcontractors and with the work or services being provided by any separate Contractors; (5) necessary to avoid undue interference with the Owner's operations or those of any utility owners or adjoining property owners; (6) necessary to ensure completion of the Work by the Specific Dates set forth in the Contract Documents; (7) required in order for CONTRACTOR to comply with the requirements of the Contract Documents or (8) not in accordance with the CONTRACTOR's actual operations.
- C. The Owner and ENGINEER will be available during normal working hours to consult with the CONTRACTOR should questions arise while the CONTRACTOR assembles the information required for the Construction Schedule.

1.04 CONSTRUCTION SCHEDULE

- A. Within ten (10) days after approval of the Construction Schedule draft by the Owner, based on the data submitted by the CONTRACTOR, the CONTRACTOR will provide a final draft time-scaled graphic network of activities and computer listing of all activities included in the Construction Schedule. The graphic representation and computer printouts shall be carefully reviewed by the Owner and discussed at a meeting with the CONTRACTOR for the purpose of finalizing the schedule. Any additions and/or deletions to these documents that are desired by the Owner will be brought to the attention of the CONTRACTOR within three (3) days. The CONTRACTOR shall, if consistent with the requirements of the Contract Documents, incorporate the Owner's revisions and shall deliver the completed Construction Schedule and computer reports to the Owner for review and acceptance within seven (7) days.
- B. CONTRACTOR shall submit as a part of the data submitted to the Owner and ENGINEER a narrative report indicating anticipated allocation by CONTRACTOR of the following resources and work shifts for each activity which they propose to be utilized on the Project:
 - 1. Labor resources;
 - 2. Equipment resources;
 - 3. Whether CONTRACTOR proposes the Work to be performed on single, double or triple shifts, and whether it is to be done on a 5-, 6- or 7-day workweek basis. If the CONTRACTOR chooses any work schedule other than the 8-hour day, 5-day workweek, and approved by the Owner, any overtime costs shall be borne by the CONTRACTOR.

1.05 SCHEDULE OF VALUES

- A. Within ten (10) days after completion of the Construction Schedule the CONTRACTOR shall

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submit to the Owner a Schedule of Values for review by the Owner, allocating a dollar value for the activities on the Construction Schedule. The dollar value for the activity shall be the cost of the work of the activity including labor, materials, and pro rata contribution of General Conditions requirements, overhead and profit. The sum of all activity costs shall equal the total Contract Sum. The CONTRACTOR shall revise the Schedule of Values as necessary to gain the approval of the ENGINEER and the Owner.

- B. The activity cost for the Schedule of Values shall be coded with a cost code corresponding to the trade, subcontractor or Supplier performing the work so that subtotals for each division of the Work can be prepared.
- C. The Schedule of Values shall, in the best judgment of the CONTRACTOR, represent a fair, reasonable and equitable dollar (cost) allocation for each activity on the Construction Schedule.
- D. The CONTRACTOR will provide, within seven (7) days after approval of the Schedule of Values, a computer listing of all cost-loaded activities for Owner and ENGINEER's review.

1.06 CONSTRUCTION SCHEDULE CONTENT

- A. The Construction Schedule shall consist of a time-scaled, detailed network graphic representation of all activities that are part of the CONTRACTOR's construction plan and an accompanying computerized mathematical analysis of these activities. The graphic network shall include, but not be limited to, the following information:
 - 1. Project Name
 - 2. Activities of completed work ready for use by next trade, owner, etc.
 - 3. Activities relating to different areas of responsibility, such as subcontracted work, which is distinctly separate from that being done by the CONTRACTOR directly;
 - 4. Different categories of work as distinguished by craft or crew requirements;
 - 5. Different categories of work as distinguished by equipment requirements;
 - 6. Different categories of work as distinguished by materials;
 - 7. Distinct and identifiable subdivisions of work such as structural slabs, beams, columns;
 - 8. Locations of work within the Project that necessitates different times or crews to perform;
 - 9. Outage schedules for existing utility services that will be interrupted during the performance of the Work;
 - 10. Acquisition and installation of equipment and materials, supplies and/or installed by the Owner or separate contractors;
 - 11. Material to be sorted on site; and
 - 12. Specific Dates.
- B. For all major equipment and materials to be fabricated or supplied for the Project, the Construction Schedule shall show a sequence of activities including:

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1. Preparation of Shop Drawings and sample submissions;
 2. A reasonable time for review of Shop Drawings and samples or such time as specified in the Contract Documents:
 3. Shop fabrication, delivery, and storage;
 4. Erection or installation; and
 5. Testing of equipment and materials.
- C. The Construction Schedule shall include late completion dates for the Work that is no later than the required Specific Dates. The time-scaled graphic network shall be drawn based upon the early start dates of activities shown on the graphic.
- D. All activity durations shall be given in calendar days.

1.07 CONTRACTOR APPROVAL AND CERTIFICATION

- A. Approval by CONTRACTOR of the drafting and computerization of the Construction Schedule and the Schedule of Values shall be signified by the CONTRACTOR by signing the following certification:

"The undersigned CONTRACTOR certifies that the Construction Schedule which is comprised of the graphic network of activities displayed on the sheets dated _____ and of the computerized mathematical reports dated _____ is the CONTRACTOR's Construction Schedule as required by the Contract Document; and that said Schedule is a true and accurate representation of CONTRACTOR's plan of construction for the Work and fully complies with the requirements of the Contract Documents. The CONTRACTOR further certifies that CONTRACTOR will prosecute the work in accordance with this schedule, subject to any change therein which is implemented in accordance with the Contract Documents; and the undersigned acknowledges that this Schedule shall be the instrument by which progress of the work shall be monitored, and together with the dollar value assigned to each activity, shall be the basis of monthly payments in accordance with the Contract Documents; and CONTRACTOR certifies they have fully complied with all of the requirements of the Contract Documents relating to coordination of said Schedule with separate contractors."

1.08 UPDATING OF CONSTRUCTION SCHEDULE/PROGRESS REPORTS

- A. On or about the dates specified, CONTRACTOR shall arrange for CONTRACTOR's project manager and superintendent to meet at Project Site with the Owner and ENGINEER to review CONTRACTOR's report of actual progress prepared by CONTRACTOR. Said report shall set forth up-to-date and accurate progress data, shall be based upon CONTRACTOR's best judgment and shall be prepared by CONTRACTOR in consultation with all CBE and principal Subcontractors and suppliers.
- B. The progress report of CONTRACTOR shall show the activities or portions of activities, completed during the reporting period, the actual start and finish dates for these activities, remaining durations and/or estimated completion dates for activities currently in progress.
- C. The CONTRACTOR will produce a computerized update work sheet for approval by the Owner as a part of this process.

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- D. CONTRACTOR shall submit a narrative report with the updated progress analysis which shall include, but not be limited to a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, any newly planned activities or changes in sequence, and proposed logic for a Recovery Schedule, if required, as further described herein. The report shall also include:
1. A narrative describing actual work accomplished during the reporting period;
 2. A list of major construction equipment used on the Work during the reporting period and any construction equipment idle during the reporting period.
 3. The total number of personnel by craft actually engaged in the Work during the reporting period, with such total stated separately as to office, supervisory, and field personnel;
 4. A labor and equipment forecast for the succeeding thirty (30) days, stating the total number of personnel by craft, and separately stating such total as to office, supervisory and field personnel;
 5. A list of CONTRACTOR supplied materials and equipment, indicating current availability and anticipated job site delivery dates;
 6. Changes or additions to CONTRACTOR's supervisory personnel since the preceding progress report.
- E. The CONTRACTOR will provide initial computer reports and monthly reports thereafter, in accordance with the following:
1. Schedule Reports: Initial and subsequent Schedule Reports will contain the following minimum information for each activity:
 - a. Activity number, description and estimated duration in days.
 - b. Early and late finish dates.
 - c. Percentage of each activity completed as of each report.
 - d. Remaining float/days behind schedule.
 - e. Responsibility for activity. Actual start and finish dates shall be indicated for each activity, as appropriate. Dummies and completed activities will be omitted from remaining Float and Late Start Sorts.
 2. Cost Reports: Initial and subsequent Cost Reports will include the following information for each activity, sorted by trade activity:
 - a. Activity number and description;
 - b. Percentage of value of Work in place against total value;
 - c. Total cost of each activity;
 - d. Value of Work in place since last report;
 - e. Value of Work in place to date;
 - f. Value of uncompleted Work.
 3. As part of the updating process, the CONTRACTOR'S computer will calculate, based upon progress data provided by CONTRACTOR and agreed to by the Owner, the value of work done for each activity based on percentage complete for each activity less the amount previously paid for past percentages completed. Summation of all values of each activity less the appropriate percent of retainage shall be the amount payable to

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the CONTRACTOR, provided that CONTRACTOR has complied with all requirements of the Contract Documents.

- F. CONTRACTOR shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by CONTRACTOR so that the progress of construction shall be maintained according to the currently approved Construction Schedule for the Work. CONTRACTOR shall notify the Owner and ENGINEER in writing, and in a timely and reasonable manner, whenever CONTRACTOR determines or anticipates that the delivery date of any material or equipment to be furnished by CONTRACTOR will be later than the delivery date indicated by the Construction Schedule, or required consistent with the completion requirements of this Contract, subject to schedule updates as herein provided.
- G. CONTRACTOR shall ensure that the critical path runs through on-site activities and that off-site activities do not control the critical path of the Construction Schedule.

1.09 INITIAL PROGRESS PAYMENT

- A. The completed Construction Schedule, including the Schedule of Values, will be required for each Application for Payment. However, one initial provisional progress payment may be payable in the sole discretion of Owner if Owner determines the CONTRACTOR is complying with these Schedules and Reports provisions during the development of the Construction Schedule and Schedule of Values as required herein and represented to be true by the ENGINEER. However, no more than one Application for Payment will be approved until all of the requirements of these Schedules and Reports provisions have been met.

1.10 RECOVERY SCHEDULE

- A. Should the updated Construction Schedule show at any time during CONTRACTOR's performance, in the sole opinion of the Owner, that the CONTRACTOR is fourteen (14) or more days behind schedule for any Specific Date, or should CONTRACTOR be required to undertake actions under Article 40 of the General Conditions hereof, the CONTRACTOR shall prepare a Recovery Schedule at no additional cost to the Owner (unless the Owner is solely responsible for the event or occurrence which has caused the schedule slippage) explaining and displaying how CONTRACTOR intends to reschedule the Work in order to regain compliance with the Construction Schedule during the immediate subsequent pay period.
- B. If the CONTRACTOR believes that all of the time can be recovered during the subsequent pay period the CONTRACTOR will be permitted to prepare a Recovery Schedule as set forth below. However, if the CONTRACTOR believes it will take more than thirty (30) days to recover all of the lost time, CONTRACTOR shall prepare and submit a request for revision to the Construction Schedule and comply with all of the requirements for a Schedule Revision.
 - 1. The CONTRACTOR shall prepare and submit to the Owner and ENGINEER a one-month maximum duration Recovery Schedule, incorporating best available information from Subcontractors and others, which will permit return to Construction Schedule at the earliest possible time. The CONTRACTOR shall prepare a Recovery Schedule to same level of detail as the Construction Schedule for a maximum duration of one month. This Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.
 - 2. Within two (2) days after submission of Recovery Schedule to the Owner and ENGINEER, CONTRACTOR shall participate in a conference with the Owner and ENGINEER to review and evaluate the Recovery Schedule. Within two (2) days of

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conference, the CONTRACTOR shall submit the revisions necessitated by the review for the Owner and ENGINEER's review and approval. The CONTRACTOR shall use the approved Recovery Schedule as their plan for returning to the Construction Schedule.

3. CONTRACTOR shall confer continuously with the Owner and ENGINEER to assess the effectiveness of the Recovery Schedule. As a result of this conference, the Owner will direct the CONTRACTOR as follows:
 - a. If the Owner determines the CONTRACTOR is still behind the schedule the Owner will direct the CONTRACTOR to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the Owner as provided elsewhere in the Contract Documents.
 - b. If the Owner determines the CONTRACTOR has successfully complied with provisions of the Recovery Schedule, the Owner will direct the CONTRACTOR to return to the use of the approved Construction Schedule.

1.11 SCHEDULE REVISIONS

- A. Should CONTRACTOR desire to or otherwise be required under the Contract Documents to make modifications or changes in CONTRACTOR's method of operation, the sequence of Work or the durations of the activities in the Construction Schedule, CONTRACTOR shall do so in accordance with the requirements of the Contract Documents. The Owner must approve revisions to the approved Construction Schedule in writing.
- B. CONTRACTOR shall submit requests for revisions to the Construction Schedule to the Owner and ENGINEER, together with written rationale for revisions and description of logic for rescheduling work and maintaining the Specific Dates listed in the Contract Documents. Proposed revisions acceptable to the Owner will be incorporated into next update of Construction Schedule. CONTRACTOR shall pay the Owner for costs incurred by the Owner for the revisions.
- C. If there are separate contractors on the Project, prior to the submission by the CONTRACTOR of their proposed schedule revisions, CONTRACTOR shall meet with and gain written approval of the separate contractors to make the revisions which shall be evidenced by the signatures of said separate contractors on the proposed schedule revisions. If accepted by the Owner the revisions shall be binding upon CONTRACTOR and all separate contractors on the Project.
- D. In submitting any proposed schedule revisions to the Owner and ENGINEER, CONTRACTOR shall submit therewith the following certification:

"The undersigned CONTRACTOR certifies that the proposed schedule revision to the Construction Schedule which comprised of the graphic network of activities displayed on the sheets dated _____ and of the computerized mathematical reports dated _____ is CONTRACTOR's schedule revision to the Construction Schedule as required by the Contract Documents; and that said schedule revision is a true and accurate representation of CONTRACTOR's plan to complete the Work, including all Change Orders that are in the CONTRACTOR's possession as of the foregoing date, and fully complies with the requirements of the Contract Documents. The CONTRACTOR further certifies that CONTRACTOR will prosecute the Work in accordance with this schedule revision, subject to any change therein which is implemented in accordance with the Contract Documents; and CONTRACTOR further

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certifies that CONTRACTOR has met and coordinated with and obtained the approval of said schedule revision by all separate contractors, as evidenced by CONTRACTOR's signature thereon; and CONTRACTOR further certifies they have fully complied with all of the requirements of the Contract Documents relating to coordination of said Schedule with separate contractors."

1.12 FLOAT TIME

- A. Float or slack time associated with one chain of activities is defined as amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the Construction Schedule. Float or slack time shown on the Construction Schedule is not for exclusive use or benefit of either the Owner, ENGINEER or the CONTRACTOR and is available for use by either of them according to whichever first needs the use or benefit of the float to facilitate the effective use of available resources and to minimize the impact of project problems, delays or Changes in the Work which may arise during performance. CONTRACTOR specifically agrees that the Owner or ENGINEER may use float time in conjunction with their review activities or to resolve for any modification of the Specific Dates or an extension of the Contract Time or a claim for additional compensation as a result of any Project problem.

- B. Float time shown on the Construction Schedule shall not be used arbitrarily by CONTRACTOR in a manner, which, in the opinion of the Owner and ENGINEER, unnecessarily delays separate contractors from proceeding with their work in a way which is detrimental to the interests of the Owner. Any conflict between contractors, or schedules or available and/or necessary work of Contractors, which may result in a delay on that Contractor performing work on this Project, shall be referred to the City for resolution. If CONTRACTOR refuses to perform Work which is available and necessary to be performed in order to not delay any separate contractors and the City has provided resolution to any conflicts, the Owner may, regardless of the float shown on the Construction Schedule to be available for the path of activities which encompasses said Work, terminate the CONTRACTOR for default pursuant to the General Conditions of this Contract.

1.13 CONTRACTOR'S ORGANIZATION

- A. CONTRACTOR shall maintain as part of their organization, or hire a subcontractor with, a competent staff of sufficient size who are knowledgeable in the use, application and implementation of CPM as required by the Contract Documents. It shall be the responsibility of this staff to prepare input information for the Construction Schedule, monitor progress, provide input for updating and revising logic diagrams when necessary and otherwise assist the CONTRACTOR in fulfilling their obligations hereunder.

1.14 DEFAULT

- A. Failure of the CONTRACTOR to substantially comply with the requirements of this Section shall constitute a default by CONTRACTOR of CONTRACTOR's obligations under this Contract sufficient for termination of CONTRACTOR under the General Conditions of this Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

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- A. No separate measurement and payment is provided for work covered by this Section. All work required in connection with Schedules and Reports shall be included in the bid price for all other work.

END OF SECTION 01311

SECTION 01340
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit Shop Drawings, Product Data and Samples required by the Contract Documents.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.
- C. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Product Data and Samples will be needed.

1.03 SHOP DRAWINGS

- A. Drawings shall be presented in readable and thorough condition.
1. Drawing size shall be in standard sizes 8½ inch X 11 inch through 24 inch X 36 inch as appropriate for detail.
 2. Details shall be identified by reference to Project Number, sheet, detail, specification section, equipment numbers, I.D. numbers and schedule numbers shown on Contract Drawings.

1.04 PRODUCT DATA

- A. Preparation
1. Clearly mark each copy to identify pertinent products or models.
 2. Show performance characteristics and capacities.
 3. Show dimensions and clearances required.
 4. Show wiring or piping diagrams and controls.
- B. Manufacturer's standard schematic drawings and diagrams:
1. Modify drawings and diagrams to delete information, which is not applicable to the work.
 2. Supplement standard information to provide information specifically applicable to the work.

1.05 SAMPLES

- A. Office samples shall be of sufficient size and quantity to clearly illustrate:
1. Functional characteristics of the product with integrally related parts and attachment devices.

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2. Full range of color, texture and pattern.

1.06 CONTRACTOR RESPONSIBILITIES

- A. Review Shop Drawings, Product Data and Samples prior to submission.
- B. Determine and verify:
 1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
 4. Conformance with specifications.
- C. Coordinate each submittal with requirements of the work and of the Contract Documents.
- D. Notify the OWNER's Representative in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents.
- E. Begin no fabrication or work, which requires submittals until return of submittals with OWNER's Representative or ENGINEER's approval.

1.07 SUBMISSION REQUIREMENTS

- A. CONTRACTOR shall furnish to the ENGINEER for review, 8 copies of each shop drawing submittal. The term "Shop Drawing" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items.
- B. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the ENGINEER. In any case, every separate item submitted for shop drawing approval will be uniquely numbered and dated, between the submittal and transmittal for proper tracking.
- C. Except as may otherwise be indicated herein, the ENGINEER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within twenty one (21) calendar days following their receipt by the ENGINEER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the second submission of a submittal item. The OWNER reserves the right to withhold monies due the contractor to cover additional costs of the ENGINEER's review beyond the second submittal. The ENGINEER's maximum review period for each submittal, including all resubmittals, will be 21 days per submittal. In other words, for a submittal that required two resubmittals before it is complete, the maximum review period for that submittal could be 63 days.
- D. If 3 copies of a submittal are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN", formal revision and resubmission of said submittal will not be required.

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- E. If 3 copies of a submittal are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal revision and resubmission of said submittal will not be required.
- F. If a submittal is returned to the CONTRACTOR marked "REVISE AND RESUBMIT" or "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER.
- G. If a submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT", the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER.
- H. Fabrication of an item shall be commenced only after the ENGINEER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either 'NO EXCEPTIONS TAKEN' or 'MAKE CORRECTIONS NOTED.' Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the contract requirements.
- I. All CONTRACTOR shop drawing submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the ENGINEER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the ENGINEER of any CONTRACTOR submittals will be made for any items, which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- J. The ENGINEER's review of CONTRACTOR shop drawing submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in CONTRACTOR submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details.
- K. Shop Drawing Distribution: Shop drawings shall be reviewed by the ENGINEER and marked either as "NO EXCEPTIONS TAKEN, "MAKE CORRECTIONS NOTED," "AMEND - RESUBMIT", or "REJECTED-RESUBMIT." The distribution of processed shop drawings shall be as follows:
 - 1. Shop drawings marked "NO EXCEPTIONS TAKEN" or 'MAKE CORRECTIONS NOTED".
 - 3 copies returned to CONTRACTOR
 - 2 copies transmitted to the OWNER
 - 1 copy to remain with the ENGINEER
 - 2 copies for the Resident Project Representative
 - 2. Shop drawings marked "AMEND-RESUBMIT" or 'REJECTED-RESUBMIT"
 - 2 copies returned to CONTRACTOR
 - 2 copies remain with the ENGINEER
 - 4 copies to be discarded
- L. Submittals shall contain:

SECTION 01340
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. The date of submission and the dates of any previous submissions.
2. The Project title and Project number.
3. Contract identification.
4. The names of:
 - a. CONTRACTOR
 - b. Supplier
 - c. Manufacturer
5. Identification of the product, with the specification section number.
6. Field dimensions, clearly identified as such.
7. Relation to adjacent or critical features of the work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Identification of deviations from Contract Documents.
10. Identification of revisions on resubmittals.
11. An 8 inch x 3 inch blank space for CONTRACTOR and OWNER's Representative and ENGINEER's stamps.
12. CONTRACTOR's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of Contract Documents.

1.08 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by OWNER's Representative and resubmit until approved.
- B. Shop Drawings and Product Data:
 1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
 2. Indicate any changes which have been made other than those requested by the OWNER's Representative.
- C. Samples: Submit new samples as required for initial submittal.

1.09 DISTRIBUTION

- A. Distribute reproduction of Shop Drawings and copies of Product Data, which carry the OWNER's Representative or ENGINEER's stamp of approval to:
 1. Job site file.

SECTION 01340
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

2. Record Documents file.
 3. Other affected CONTRACTORS.
 4. Subcontractors
 5. Supplier or Fabricator.
- B. Distribute samples which carry the OWNER's Representative or ENGINEER's stamp of approval as directed by the OWNER's Representative or ENGINEER.
- 1.10 OWNER'S REPRESENTATIVE OR ENGINEER DUTIES
- A. Review submittals with reasonable promptness and in accord with schedule.
 - B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or approval of submittal.
 - C. Return submittals to CONTRACTOR for distribution, or for resubmission.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

END OF SECTION 01340

PART 1 - GENERAL

1.01 DEFINITION

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.02 INSPECTION AT PLACE OF MANUFACTURE

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- B. The presence of the ENGINEER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR and said duty shall not be avoided by any act or omission on the part of the ENGINEER.

1.03 SAMPLING AND TESTING

- A. Unless otherwise indicated, 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 OWNER reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER will insure the OWNER that the quality of the work is in full accord with the Contract Documents.
- B. Any waiver by the OWNER 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.

1.04 INSPECTION AND TESTING LABORATORY SERVICE

- A. Inspection and testing laboratory service shall comply with the following:
 - 1. The CONTRACTOR will appoint, employ, and pay for services of an independent firm to perform inspection and testing.
 - 2. The CONTRACTOR or independent firm will perform inspections, testings, and other services specified in individual specification sections and as required by the ENGINEER.
 - 3. Reports will be submitted to the ENGINEER in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

SECTION 01400
QUALITY CONTROL

4. The CONTRACTOR shall cooperate with the OWNER or independent firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
5. The CONTRACTOR shall notify ENGINEER 48 hours prior to the expected time for operations requiring inspection and laboratory testing services.
6. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER. The CONTRACTOR shall bear all costs from such retesting at no additional cost to the OWNER.
7. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of sampling and testing for the CONTRACTOR'S use shall be included in the Contract Price.
8. CONTRACTOR shall bear all costs if materials for testing are not ready for testing at time specified by CONTRACTOR for the test.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Inspection: The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. Measurements: The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. Manufacturer's Instructions: Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

END OF SECTION 01400

PART 1 GENERAL

1.01 GENERAL

- A. Mobilization shall include the obtaining of all permits; moving onto the site of all equipment; temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
1. Moving on to the site of all CONTRACTOR's equipment required for first month operations.
 2. Installing temporary construction power, wiring, and lighting facilities.
 3. Developing construction water supply.
 4. Providing on-site sanitary facilities and potable water facilities.
 5. Arranging for and erection of CONTRACTOR's work, site access, and storage.
 6. Obtaining all required permits.
 7. Having all OSHA required notices and establishment of safety programs.
 8. Submitting initial submittals.
 9. Audio-Visual preconstruction record as described in Section 01010.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 PAYMENT FOR MOBILIZATION

- A. The CONTRACTOR's attention is directed to the condition that no payment for mobilization, or any part thereof will be approved for payment under the Contract until all mobilization items listed in Paragraph 1.01.A. above have been completed as specified. Furthermore, if Contractor does not have required sanitary and potable facilities in order within the first month of construction, a prorated amount of mobilization will be removed from the mobilization line item, for the extent of time taken to furnish said facilities.

END OF SECTION 01505

**SECTION 01530
PROTECTION OF EXISTING FACILITIES**

PART 1 - GENERAL

1.01 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. The CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK. All such exploratory excavations shall be performed as soon as practicable after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's work. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.02 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved: In the case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ENGINEER and the OWNER of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. OWNER's Right of Access: The right is reserved to the OWNER and to the OWNERS of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- E. Underground Utilities Indicated: Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage

**SECTION 01530
PROTECTION OF EXISTING FACILITIES**

during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR at no cost to the CITY.

- F. **Underground Utilities Not Indicated:** In the event that the CONTRACTOR damages any existing utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ENGINEER. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions contained in these Contract Documents.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for in accordance with the provisions of the Contract Documents.
- H. **Approval of Repairs:** All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement OWNER and the ENGINEER before being concealed by backfill or other work.
- I. **Maintaining in Service:** All oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.
- J. **Existing Water Services:** CONTRACTOR shall protect and provide temporary support for existing water services. Any water service damaged by the CONTRACTOR, shall be replaced at the CONTRACTOR's expense, with a new water service complete with new water main tap..

1.03 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 OWNERS or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said OWNERS or agencies can be present during such work if they so desire. The CONTRACTOR shall also notify the Sunshine State One Call Center 1-800-432-4770 at least 2 days, but no more than 14 days, prior to such excavation.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

**SECTION 01530
PROTECTION OF EXISTING FACILITIES**

2.02 FENCING

- A. Materials to CONTRACTOR's option, minimum fence height = 6 feet.

2.03 BARRIERS

- A. Materials to CONTRACTOR's option, as appropriate to serve required purpose.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install facilities with a neat and reasonable uniform appearance, structurally adequate for required purposes.
- B. Maintain barriers during entire construction period.
- C. Relocate barriers as required by progress of construction.

3.03 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by OWNER's Representative.
- B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

3.04 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

END OF SECTION 01530

PART 1 - GENERAL

1.02 TEMPORARY CROSSINGS:

- A. 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, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority.
- B. 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 Broward County and 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 the Florida Department of Transportation.

The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.

1.03 CONTRACTOR'S WORK AND STORAGE AREA:

- A. The CONTRACTOR shall designate and arrange for the use of a portion of the property, adjacent to the WORK for its exclusive use during the term of the Contract as a storage and shop area for its construction operations relative to this Contract.
- B. The CONTRACTOR's use of the project site shall be limited to its construction operations. The CONTRACTOR shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the WORK. A copy of an agreement for use of other property shall be furnished to the OWNER. No material may be stored in the public right of way without prior authorization by the agency having jurisdiction. No material shall be stored within the public right of way in excess of 15 days. The CONTRACTOR shall keep these areas in a clean and orderly condition so as not to cause a nuisance or sight obstruction to motorists or pedestrians.
- C. The CONTRACTOR shall construct and use a separate storage area for hazardous materials used in constructing the WORK.
 - 1. For the purpose of this paragraph, hazardous materials to be stored in the separate area are all products labeled with any of the following terms: Warning, Caution, Poisonous, Toxic, Flammable, Corrosive, Reactive, or Explosive. In addition, whether or not so labeled, the following materials shall be stored in the separate area: diesel fuel, gasoline, new and used motor oil, hydraulic fluid, cement, paints and paint thinners, two-part epoxy

SECTION 01550
SITE ACCESS AND STORAGE

coatings, sealants, asphaltic products, glues, solvents, wood preservatives, sand blast materials, and spill absorbent.

2. Hazardous materials shall be stored in groupings according to the Material Safety Data Sheets.
3. The CONTRACTOR shall develop and submit to the ENGINEER a plan for storing and disposing of the materials above.
4. The CONTRACTOR shall obtain and submit to the ENGINEER a single EPA number for wastes generated at the site.
5. The separate storage area shall meet all the requirements of all authorities having jurisdiction over the storage of hazardous materials.
6. All hazardous materials which are delivered in containers shall be stored in the original containers until use. Hazardous materials which are delivered in bulk shall be stored in containers which meet the requirements of authorities having jurisdiction.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of Mobilization and of all other work.

END OF SECTION 01550

**SECTION 01560
TEMPORARY CONTROLS**

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Provide and maintain methods, equipment, and temporary construction, as necessary, to provide controls over environmental conditions at the construction site and related area under CONTRACTOR's control; remove physical evidence of temporary facilities at completion of work.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 NOISE CONTROL

- A. Provide all necessary requirements for noise control during the construction period.
 - 1. Noise procedures shall conform to all applicable OSHA requirements and local ordinances having jurisdiction on the work.
 - 2. Noise levels during nighttime hours shall not exceed 55 db measured at the property line of a residence.

1.04 DUST CONTROL

- A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent air-borne dust from dispersing into the atmosphere.

1.05 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.
 - 1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
- B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.06 PEST CONTROL

- A. Provide pest control as necessary to prevent infestation of construction or storage area.
 - 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.

**SECTION 01560
TEMPORARY CONTROLS**

2. Should the use of pesticides be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to ENGINEER. Clearly indicate:
 - a. The area or areas to be treated.
 - b. The pesticide to be used, with a copy of the manufacturer's printed instructions.
 - c. The pollution preventative measures to be employed.
- B. The use of any pesticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.07 RODENT CONTROL

- A. Provide rodent control as necessary to prevent infestation of construction or storage area.
 1. Employ methods and use materials, which will not adversely affect conditions at the site or on adjoining properties
 2. Should the use of rodenticide be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to OWNER's Representative. Clearly indicate:
 - a. the area or areas to be treated.
 - b. the rodenticide to be used, with a copy of the manufacturer's printed instructions.
 - c. the pollution preventative measures to be employed.
- B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.08 DEBRIS CONTROL

- A. Maintain all areas under CONTRACTOR's control free of extraneous debris.
- B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.
 1. Provide containers for deposit of debris as specified in Section 01710 - Cleaning.
 2. Prohibit overloading of trucks to prevent spillage on access and haul routes.
 - a. Provide periodic inspection of traffic areas to enforce requirements.
- C. Schedule periodic collections and disposal of debris as specified in Section 01710 - Cleaning.
 1. Provide additional collections and disposal of debris whenever the periodic schedule is inadequate to prevent accumulation.

1.09 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.

**SECTION 01560
TEMPORARY CONTROLS**

- B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids.
 - 1. Excavate and dispose of any contaminated earth off-site and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.
 - 1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.

1.10 EROSION CONTROL

- A. Plan and execute construction and earthwork, by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.
 - 1. Hold the areas of bare soil exposed at one time to a minimum
 - 2. Provide temporary control measures such as berms, dikes and drains.
 - 3. Provide silt screens as required preventing surface water contamination.
- B. Construct fills and waste areas by selective placement to eliminate surface silts or clays, which will erode.
- C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.
- D. All erosion control procedures must comply with the National Pollutant Discharge Elimination System (NPDES). The CONTRACTOR shall develop and implement a Stormwater Pollution Prevention Plan as outlined by NPDES.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION 01560

**SECTION 01570
TRAFFIC REGULATIONS**

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Provide, operate and maintain equipment, services and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow on haul routes, at site entrances, on-site access roads, and parking areas.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or specified conditions.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 FLAGPERSON

- A. Provide qualified and suitably equipped flag-person when construction operations encroach on traffic lanes, as required for regulation of traffic.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement and payment for work under the section; it shall be included in the lump sum price bid for Maintenance of Traffic.

END OF SECTION 01570

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the work:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type and quality specified, or as specifically approved in writing by the OWNER's Representative.
 - 3. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation prior to installation, including two copies to OWNER's Representative. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with OWNER's Representative for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

**SECTION 01600
MATERIAL AND EQUIPMENT**

1.04 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site. Products shall be delivered to the job site on an "as needed" basis.
- B. Provide equipment and personnel to handle products by methods which prevent soiling or damage to products or packaging.
- C. Coordinate deliveries to avoid conflict with Work and conditions at site such as:
 - 1. Work of other contractors, or OWNER.
 - 2. Limitations of storage space.
 - 3. Availability of equipment and personnel for handling products.
 - 4. OWNER's use of premises.
- D. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.
- E. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.
- F. Immediately on delivery, inspect shipment to assure:
 - 1. Product complies with requirements of Contract Documents and approved submittals.
 - 2. Quantities are correct.
 - 3. Containers and packages are intact, labels are legible.
 - 4. Products are properly protected and undamaged.
- G. Provide equipment and personnel necessary to handle products, including those products provided by OWNER, by methods which prevent soiling or damage to products or packaging.
- H. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
- I. Handle products by methods to prevent bending or overstressing.
- J. Lift heavy components only at designated lifting points.

1.05 STORAGE

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather-tight enclosures.

**SECTION 01600
MATERIAL AND EQUIPMENT**

2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
3. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.

B. Exterior Storage

1. Provide substantial platforms, blocking or skids to support fabricating products above ground, prevent soiling or staining.
 - (a) Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
2. Store loose granular materials on solid surface such as paved areas, or provide plywood or sheet materials to prevent mixing with foreign matter.
3. Provide surface drainage to prevent flow or ponding of rainwater.
4. Prevent mixing of refuse or chemically injurious materials or liquids.

1.06 MAINTENANCE OF STORAGE

- A.** Maintain periodic system of inspection of stored products on scheduled basis to assure that:
1. State of storage facilities is adequate to provide required conditions.
 2. Required environmental conditions are maintained on continuing basis.
 3. Surfaces of products exposed to elements are not adversely affected.
 - (a) Any weathering of products, coatings and finishes is not acceptable under requirements of Contract Documents.
- B.** Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on the exterior of packaging.

1.07 PROTECTION AFTER INSTALLATION

- A.** Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B.** Control traffic to prevent damage to equipment and surfaces.
- C.** Provide coverings to protect finished surfaces from damage.
1. Cover projections, wall corners, and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.
 2. Protect finished floors and stairs from dirt and damage.

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MATERIAL AND EQUIPMENT**

- (a) In areas subject to foot traffic, secure heavy paper, sheet goods, or other materials in place.
- (b) For movement of heavy products, lay planking or similar materials in place.
- (c) Cover wall and floor surfaces in the vicinity of construction personnel activities and all finished surfaces used by construction personnel.

D. Waterproofed surfaces

- 1. Prohibit use of surfaces for traffic of any kind, and for storage of any products.
- 2. When some activity must take place in order to carry out the Contract, obtain recommendations of installer for protection of surface.
 - (a) Install recommended protection; remove on completion of that activity.
 - (b) Restrict use of adjacent unprotected areas.

E. Lawns and landscaping

- 1. Prohibit traffic of any kind across planted lawn and landscaped areas.

F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

1.08 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Products List

- 1. Within 15 days after Contract Date submit to ENGINEER a complete list of major products proposed to be used, with the name of the manufacturer and the installing Subcontractor.

B. Contractors Options

- 1. For products specified only by reference standard, select any product meeting that standard.
- 2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named or approved equal, which complies with the Specifications.
- 3. For products specified by naming one or more products or manufacturers and "or approved equal," CONTRACTOR must submit a request as for substitutions for any product or manufacturer not specifically named.

C. Substitutions

- 1. For a period of 15 days after Contract Date, ENGINEER will consider written request from CONTRACTOR for substitution of products.

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2. Identify product by specification Section and Article Numbers. Provide manufacturer's name and address, trade name of product, and model or catalog number. List fabricators and suppliers as appropriate.
 3. List similar projects using product, dates of installation, and names of ENGINEER and OWNER.
 4. List availability of maintenance services and replacement materials.
 5. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities and performance of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the product specified.
 - e. Any required license fees or royalties.
 - f. Availability of maintenance services, and source of replacement materials.
 6. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
 7. The ENGINEER will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ENGINEER's decision shall be final.
 8. The ENGINEER may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute.
 9. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
 10. Acceptance by the ENGINEER of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
 11. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR work, the work of its Subcontractors and of other Contractors, and shall effect such changes without cost to the OWNER.
- D. Contractors Representation:
1. A request for a substitution constitutes a representation that CONTRACTOR:
 - a. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.

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- b. Will provide the same guarantees or bonds for the substitution as for the product specified.
- c. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
- d. Waives all claims for additional costs, under CONTRACTOR'S responsibility, which may subsequently become apparent.

E. Submittal Procedures

- 1. Submit three (3) copies of request for substitution.
- 2. ENGINEER will review requests for substitutions with reasonable promptness, and notify CONTRACTOR, in writing, of the decision to accept or reject the requested substitution.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01600

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Comply with requirements stated in Conditions of the Contract and in specifications for administrative procedures in closing out the work.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 SUBSTANTIAL COMPLETION

- A. When CONTRACTOR considers the work is substantially complete, CONTRACTOR shall submit to OWNER's Representative:
 - 1. A written notice that the work, or designated portion thereof is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, OWNER's Representative and ENGINEER will make an inspection to determine the status of completion.
- C. Should OWNER's Representative determine that the work is not substantially complete:
 - 1. OWNER's Representative will promptly notify the CONTRACTOR in writing, giving the reasons therefore.
 - 2. CONTRACTOR shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the OWNER's Representative.
 - 3. OWNER's Representative and ENGINEER will re-inspect the work.
- D. When OWNER's Representative and ENGINEER concur that the work is substantially complete, OWNER's Representative will:
 - 1. Prepare a Certificate of Substantial Completion form accompanied by CONTRACTOR's list of items to be completed or corrected, as verified and amended by the OWNER's Representative.
 - 3. Submit the Certificate to the OWNER and the CONTRACTOR for their written acceptance of the responsibilities assigned to them in the Certificate.

1.04 FINAL INSPECTION

- A. When CONTRACTOR considers the work is complete, CONTRACTOR shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.

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3. Work has been completed in accordance with Contract Documents.
 4. Equipment and systems have been tested in the presence of the OWNER's Representative and are operational.
 5. Work is completed and ready for final inspection.
- B. OWNER's Representative and ENGINEER will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should OWNER's Representative and ENGINEER consider that the work is incomplete and defective:
1. OWNER's Representative will promptly notify the CONTRACTOR, in writing, listing the incomplete or defective work.
 2. CONTRACTOR shall take immediate steps to remedy the stated deficiencies, and send a second written certification to OWNER's Representative that the work is complete.
 3. OWNER's Representative and ENGINEER will re-inspect the work.
- D. When the OWNER's Representative finds that the work is acceptable under the Contract Documents, OWNER's Representative shall request the CONTRACTOR to make closeout submittals.

1.05 REINSPECTION FEES

- A. Should OWNER's Representative perform re-inspections due to failure of the work to comply with the claims of status of completion made by the CONTRACTOR:
1. OWNER will compensate OWNER's Representative and ENGINEER for such additional services.
 2. OWNER will deduct the amount of such compensation from the final payment to the CONTRACTOR.

1.06 CONTRACTOR'S CLOSEOUT SUBMITTALS TO OWNER'S REPRESENTATIVE

- A. Evidence of compliance with requirements of governing authorities.
1. Certificate of Occupancy.
 2. Certificates of Inspection.
 - (a) Mechanical
 - (b) Electrical
 - (c) Other, as may be required.
- B. Project Record Documents: To requirements of Section 01720.
- C. Evidence of Payment and Release of Liens: To requirements of General and Supplementary General Conditions.

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CONTRACT CLOSEOUT**

- D. Certificate of Insurance for Products and Completed Operations.
- E. Permit closeouts and certifications.

1.07 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to OWNER's Representative.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - (a) Previous Change Orders.
 - (b) Allowances.
 - (c) Unit Prices.
 - (d) Deductions for uncorrected work.
 - (e) Penalties and Bonuses.
 - (f) Deductions for liquidated damages.
 - (g) Deductions for re-inspection payments.
 - (h) Other adjustments.
 - 3. Total Contract Sum, as required.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. OWNER's Representative will prepare a final Change Order, reflecting approved adjustments to the Contract Sum, which were not previously made by Change Orders.

1.08 FINAL APPLICATION FOR PAYMENT

- A. CONTRACTOR shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01700

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by the General Conditions.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulation of waste material, rubbish and windblown debris, resulting from Construction Work.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.
- D. The OWNER's Representative reserves the right to direct the CONTRACTOR to remove waste materials, after which waste shall be removed within 24 hours.
- E. Mechanical Sweeping: CONTRACTOR shall maintain on site a mechanical sweeping device for removing debris from existing, temporary and permanent pavement.

3.02 DUST CONTROL

- A. Perform operations so that dust and other contaminants resulting from Construction Work operations will not cause any damages or maintenance problems to adjacent properties.

**SECTION 01710
CLEANING**

- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled laborers for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Polish glossy surfaces to a clear shine.
- D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- E. Prior to final completion, or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify the entire work is clean.
- F. All storage and staging areas shall be cleaned and returned to prior conditions or better as per requirements of this section.

3.04 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION 01710

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site of the OWNER a record copy of:
 - 1. Drawings (AutoCAD 2015 or approved equal)
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other modifications to the Contract.
 - 5. Approved Shop Drawings, Product Data and Samples.
 - 6. Field Test Records.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Make documents and samples available at all times for inspection by OWNER's Representative.

1.05 RECORDING

- A. Label each document, "PROJECT RECORD" in neat large printed letters, or by rubber stamp.
- B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- C. Drawings: Legibly mark to record actual construction: (in AutoCAD 2015 format or approved equal)
 - 1. Horizontal (NAD 83) and vertical (NAVD 88) locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by Field Order or by Change Order.
 - 5. Details not on original Contract Drawings.
- D. Specifications and Addenda; Legibly mark each Section to record:

SECTION 01720
PROJECT RECORD DOCUMENTS

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by Supplemental Instruction, Field Order or by Change Order.

1.06 AS-BUILT PLANS (AS-BUILT DRAWINGS)

- A. The CONTRACTOR shall maintain full size (24 inch X 36 inch) field drawings and electronic drawings in AutoCAD 2015 format (or approved equal) to reflect the "as-built" items of work as the work progresses. Upon completion of the work, the CONTRACTOR shall prepare a record set of "as-built" drawings on full-size, reproducible material. One set of full size design drawings on reproducible material will be furnished to the CONTRACTOR by the design ENGINEER at the current square foot price. No separate payment will be made for those "as-built" drawings.
- B. The cost of maintaining record changes, and preparation of the As-Built Drawings shall be included in the unit prices bid for the affected items. Upon completion of the work, the CONTRACTOR shall furnish the ENGINEER the reproducible "as-built" drawings. The completed As-Built Drawings shall be delivered to the ENGINEER at least 48 hours prior to final inspection of the work. The Final Inspection will not be conducted unless the As-Built Drawings are in the possession of the ENGINEER.
- C. The completed (or final) As-Built Drawings shall be certified by a Professional Surveyor and Mapper per Florida Statute 472.001-472.037. This certification shall consist of the surveyor's embossed seal bearing registration number, the surveyor's signature and date on each sheet of the drawing set. In addition, the key sheet, cover sheet or first sheet of the plans set shall list the business address and telephone number of the surveyor.
- E. The CONTRACTOR shall submit one set of progress As-Built Drawings with each application for payment. This drawing shall accurately depict the work completed and for which payment is being requested.

1.07 PROGRESS AS-BUILT DRAWING INFORMATION

- A. Submit with each progress payment application progress "As-Built" drawing information current to the date of the submittal date with verification by the OWNER's Representative.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

END OF SECTION 01720

SECTION 02010
SUB-SURFACE INVESTIGATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the sub-surface investigation work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".
- B. The sub-surface investigation for conditions of the project site is the sole responsibility of the CONTRACTOR.
- C. OWNER or OWNER's Representative provides limited sub-surface information, and makes no warranties or guarantees concerning the nature of materials to be encountered on the site.

1.03 RELATED WORK

- A. All applicable sections under Divisions 1, 2, 3, and 4.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION 02010

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the site demolition work, as indicated on the drawings.

1.03 RELATED WORK

- A. All applicable sections.

1.04 QUALITY ASSURANCE

- A. CONTRACTOR Qualifications: Minimum of five years of experience in demolition of comparable nature.
- B. Requirements of All Applicable Regulatory Agencies:
 - 1. All applicable Building Codes and other Public Agencies having jurisdiction upon the work.

1.05 SUBMITTALS

- A. Permits and notices authorizing building demolition.
- B. Certificates of severance of utility services.
- C. Permit for transport and disposal of debris.
- D. Demolition procedures and operational sequence for review and acceptance by ENGINEER.

1.06 JOB CONDITIONS

- A. Existing Conditions
 - 1. The demolition work shall be done as indicated on the construction plans.
 - 2. Remove all demolition debris from the site the same day the work is performed. Leave no deposits of demolished material on site overnight.
 - 3. Structural demolition, excavation, backfill and compaction as indicated in drawings.
- B. Protection:
 - 1. Erect barriers, fences, guardrails, enclosures, and shoring to protect personnel, structures, and utilities remaining intact.

**SECTION 02050
DEMOLITION**

2. Protect designated trees and plants from damages.
 3. Use all means necessary to protect existing objects and vegetation designated to remain, and, in the event of damage, immediately make all repairs, replacements and dressings to damaged plants necessary, to the approval of the ENGINEER at no additional cost to the OWNER.
- C. Maintaining Traffic:
1. Ensure minimum interference with roads, streets, driveways, sidewalks, and adjacent facilities.
 2. Do not close or obstruct streets and sidewalks without written approval from the ENGINEER.
 3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.
- D. Dust Control:
1. Use all means necessary for preventing dust from demolition operations from being a nuisance to adjacent property owners. Methods used for dust control are subject to approval by the ENGINEER prior to use.
- E. Burning:
1. On-site burning will not be permitted.
- 1.07 GENERAL ITEMS
- A. Scope of work shall comprise the following: Provide all labor, materials, necessary equipment and services to complete the demolition and clearing work, as indicated on the contract plans, and as specified herein.
 - B. The CONTRACTOR shall provide references to the OWNER to demonstrate that they are well versed in demolition of a comparable nature. Current occupational licenses held by CONTRACTOR shall be submitted to OWNER.
 - C. The CONTRACTOR shall be responsible for adherence to all applicable codes of all regulatory agencies having jurisdiction upon the works.
- 1.08 PRE-DEMOLITION MEETING
- A. A meeting shall be held with the OWNER or OWNER's representative at the jobsite to describe intended demolition and cleaning procedures and schedules. This shall include identifying access routes for bringing necessary equipment in, removing debris from site, and designation of any trees, drives or other items to remain.
- 1.09 EXISTING CONDITIONS
- A. The CONTRACTOR shall become thoroughly familiar with the site, and of existing utilities and their connections, and note all conditions, which may influence the work.

**SECTION 02050
DEMOLITION**

- B. By submitting a bid, the CONTRACTOR affirms that CONTRACTOR has carefully examined the site and all conditions affecting work. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.
- C. The OWNER shall be responsible for removal of all hazardous materials such as asbestos, chemicals, etc., from the site prior to CONTRACTOR mobilizing on site. The OWNER shall be notified immediately should the CONTRACTOR discover any further hazardous materials during demolition.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 INSPECTION

- A. Contractor shall verify that structures to be demolished are discontinued in use and ready for removal.
- B. Contractor shall not commence work until all conditions and requirements of all applicable public agencies are complied with.

3.02 PREPARATION

- A. Arrange for, and verify termination of utility services to include removing meters and capping lines.
- B. Notification:
 - 1. Notify the OWNER at least three full working days prior to commencing the work of this Section.
- C. The drawings do not purport to show all objects existing on the site; at the pre-demolition meeting before commencement of the work, verify with the OWNER all objects to be removed and all objects to be preserved.

3.03 CLARIFICATION

- A. The drawings do not purport to show all objects existing on the site.
- B. Before commencing the work of this Section, verify with the OWNER all objects to be removed and all objects to be preserved.

3.04 SCHEDULING

- A. Schedule all work in a careful manner with all necessary consideration for the public and the OWNER.
- B. Avoid interference with the use of, and passage to and from, adjacent facilities.

3.05 DISCONNECTION OF UTILITIES

- A. Before starting site operations, disconnect or arrange for the disconnection of all affected utility
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**SECTION 02050
DEMOLITION**

service.

1. Arrange and pay for disconnecting, removing, capping, and plugging utility services. Disconnect and stub off. Notify affected utility company in advance and obtain approval before starting this work.
2. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction.
3. Place markers to indicate location of disconnected services.
4. On-site drainage structures and drain fields shall be removed in their entirety by methods approved by the OWNER's representative.

3.06 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. Utility Services: Maintain existing offsite utilities, keep in service, and protect against damage during demolition operations.
- B. Prevent movement or settlement of adjacent structures. Provide and place bracing or shoring and be responsible for safety and support of structures. Assume liability for such movement, settlement, damage, or injury.
- C. Cease operations and notify OWNER immediately if safety of adjacent structures appears to be endangered. Take precautions to properly support structures. Do not resume operations until safety is restored.
- D. Prevent movement, settlement, damage, or collapse of adjacent services, sidewalks, driveways and trees. Assume liability for such movement, settlement, or collapse. Promptly repair damage at no cost to the OWNER.
- E. Ensure safe passage of persons around areas of demolition.

3.07 MAINTAINING TRAFFIC

- A. Do not interfere with use of adjacent buildings and facilities. Maintain free and safe passage to and from. Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed travel ways if required by governing authorities.

3.08 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- B. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations as directed by the OWNER or their representative or governing authorities. Return adjacent areas to condition existing prior to start of work.

3.09 DEMOLITION

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**SECTION 02050
DEMOLITION**

- A. Pull out any existing utility lines designated for abandonment, irrigation, electrical lines, pull boxes and splice boxes, Maintenance Access Structure (MAS) and catch basins to be removed and all other objects designated to be removed or interfering with the work. Contact the utility company or agency involved for their requirements for performing this work. All removed equipment and materials shall be removed from the work area the same day as removed.
- B. Remove all debris from the site and leave the site in a neat, orderly condition to the full acceptance of the ENGINEER, or the OWNER. No debris shall be left on the site overnight.
- C. Clear and Grub and dispose of all hedges, shrubs and other organic matter not otherwise addressed on tree removal and relocation plans and specifications.

3.10 DEMOLITION OF SITE STRUCTURES

- A. Demolish all site structure items designated to be removed or which are required to be removed to perform the work. This item does not include buildings.

3.11 REMOVAL OF DEBRIS AND DISPOSAL OF MATERIAL

- A. Material resulting from demolition and not scheduled for salvaging shall become the property of the CONTRACTOR and shall be removed from site and legally disposed of off-site. Disposal shall be timely, performed as promptly as possible and not left until the final cleanup. Material shall not be left on the job site for more than 60 days.
- B. Remove from site contaminated, vermin infested, or dangerous materials encountered and disposed of by safe means so as not to endanger health of workers and public.
- C. Burning of removed materials from demolished structures will not be permitted on-site.

3.12 COMPLETION OF WORK

- A. Leave the site in a neat, orderly condition to the full acceptance of the OWNER.
- B. Dirt remaining after demolition shall be graded level and compacted, in preparation for filling operations to follow demolition. Trenches shall be filled in layers of 12 inch maximum thickness and compacted in accordance with the technical specifications applicable to backfilling of trenches.

3.13 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section. It shall be included in the lump sum price bid for items associated with the demolition.

END OF SECTION 02050

SECTION 02221
EXCAVATION AND BACKFILLING UTILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. The work shall consist of furnishing all materials, labor and equipment for excavation, trenching and backfilling for utilities. "Utilities" shall include storm water drains, culverts, water mains, gravity sewers, sewage force mains and appurtenant structures.

1.03 RELATED WORK

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 EXCAVATION

- A. General: This work shall consist of the excavation of whatever substances shall be encountered to the depths as shown on the plans. Excavated materials not required for fill or backfill shall be removed from the work site as directed by the ENGINEER and shall be considered to be a part of the bid price of the utility pipe for which excavation and backfill is required.
- B. Excavation for structures and other accessories shall have a minimum clearance of twelve inches and a maximum clearance of twenty-four inches on all sides.
- C. Excavation shall not be carried below the required depths as indicated by the plans. Excess excavation below the required level shall be backfilled at the CONTRACTOR's expense with sharp sand, gravel or other suitable material thoroughly compacted and approved by the ENGINEER.
- D. Any unstable soil shall be removed and shall be replaced by material acceptable to the ENGINEER. The removal and replacement of such unstable soil shall be considered to be part of the bid price of the pipe for which excavation and backfill is required.
- E. Water shall not be permitted to accumulate in the excavated area. It shall be removed by pumping or other means as approved by the ENGINEER. The removal of water shall be considered to be a part of the bid price of the pipe for which excavation and backfill is required.

Well points, pumps or other approved means shall be used to keep the ground water sufficiently low in the opinion of the ENGINEER to permit the placing of concrete, masonry or pipe in first class condition, and sufficiently long thereafter to protect the concrete, masonry or joints against washing or damage.

The CONTRACTOR shall also use such other means as may be necessary to keep the excavation in satisfactory condition for the construction of the work, and the use of well points, or other approved method, will not relieve the CONTRACTOR of CONTRACTOR'S responsibility to make structures water tight.

- F. Banks and trenches shall be vertical unless shown otherwise on plans.

SECTION 02221
EXCAVATION AND BACKFILLING UTILITIES

- I. Whenever it is necessary, in the interest of safety, to brace or shore the sides of the trench, such bracing or shoring shall be considered to be part of the bid price of the pipe for which excavation and backfill is required.

3.02 BACKFILLING

- A. After pipes, structures and other appurtenances have been installed, the trench or opening shall be backfilled with material free from large stones or clods of a quality acceptable to the ENGINEER.
- B. Backfill around the pipe and to a point twelve inches above the top of the pipe shall be placed in six inch layers compacted with 20 pound hand tampers or mechanical tampers suitable for this purpose. Backfilling shall follow lying closely, and shall not be more than one hundred (100) feet behind completed lying. Backfill over pipe shall be carefully placed by experienced labor and thoroughly consolidated without shock to the pipe, and carried up uniformly on both sides of the pipe.
- C. In areas where no pavement is to be constructed, the backfill above the twelve inch line above the pipe shall be compacted to firmness approximately equal to that of the soil adjacent to the pipe trench or to that as noted in Section 02200. Backfill below the 12-inch line shall be compacted in 6-inch layers (compacted thickness) and shall be compacted to 98% of maximum density as determined by AASHTO T-180.

3.03 PAYMENT AND MEASUREMENT

- A. No separate payment is provided for work covered by this Section. All costs in connection with Excavation and Backfilling, including testing, shall be included in the bid price of any item for which excavation and backfilling is required.

END OF SECTION 02221

**SECTION 02510
CONCRETE SIDEWALK**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. The work specified in this Section consists of the construction of concrete sidewalk in accordance with these Specifications and in conformity with the lines, grades, dimensions and notes shown on the plans.

1.03 RELATED WORK

- A. Section 03010 - Concrete
- B. Section 03300 - Cast-In-Place Concrete
- C. Section 03370 - Concrete Curing

PART 2 - PRODUCTS

2.01 CONCRETE

- A. Concrete shall be Class I Concrete, with a minimum compressive strength of 3,000 psi in accordance with Section 345, Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.02 FORMS

- A. Forms for this work shall be made of either wood or metal and shall have a depth equal to the plan dimensions for the depth of concrete being deposited against them. They shall be straight, free from warp or bends, and of sufficient strength when staked, to resist the lateral pressure of the concrete without displacement from lines and grade. Forms shall be cleaned each time they are used and shall be oiled prior to placing the concrete.

2.03 SUBGRADE AND GRADING

- A. Excavation shall be made to the required depth, and the foundation material upon which the sidewalk is to be set shall be compacted to a firm, even surface, true to grade and cross-section, and shall be moist at the time that the concrete is placed.

2.04 JOINTS

- A. Contraction joints may be of the open type or may be sawed. Staking a metal bulkhead in place and depositing the concrete on both sides shall form open type contraction joints. After the concrete has set sufficiently to preserve the width and shape of the joint, the bulkhead shall be removed. After the sidewalk has been finished over the joint, the slot shall be edged with a tool having a 1/2-inch radius.

If the CONTRACTOR elects to saw the contraction joints, a slot approximately 1/8 inch wide and not less than 1-1/2 inches deep shall be cut with a concrete saw after the concrete has set, and within the following periods of time:

**SECTION 02510
CONCRETE SIDEWALK**

Contraction joints shall be constructed at not more than 20-foot intervals, and shall be in place within 12 hours after finishing.

PART 3 - EXECUTION

3.01 PLACING

- A. The concrete shall be placed in the forms to the required depth and shall be vibrated and spaded until mortar entirely covers its surface.

3.02 FINISHING

- A. Screeding: The concrete shall be struck-off by means of a wood screed, used perpendicular to the forms, and floated in order to obtain the required grade and remove surplus water and laitance.
- B. Surface requirements: The concrete shall be given a broom finish. The surface variations shall not be more than 1/4 inch under a ten-foot straightedge, nor more than 1/8 inch on a five-foot transverse section. The exposed edge of the slab shall be carefully finished with an edging tool having a radius of 1-1/2 inch.

3.03 CURING

- A. The concrete shall be continuously cured for a period of at least 72 hours. Curing shall be commenced after finishing has been completed and as soon as the concrete has hardened sufficiently, to permit application of the curing material without marring the surface.
- B. Wet burlap, white-pigmented curing compound, waterproof paper or polyethylene sheets may be used for the curing of grey concrete only.

3.04 COLORED CONCRETE (NOT USED)

- A. Colored – Conditioned Concrete shall be placed, finished, and cured in strict accordance with applicable requirements of this Section and Sections 03010, 03370, and the requirements of the chosen manufacturer.

3.05 MEASUREMENT AND PAYMENT

- A. Measurement and payment will be based on the actual quantities installed as more specifically discussed and described in Section 01025 for MEASUREMENT AND PAYMENT.

END OF SECTION 02510

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. The CONTRACTOR shall furnish and install all piping systems shown and specified, in accordance with the requirements of the Contract Documents. Each system shall be complete with all necessary fittings, hangers, supports, anchors, expansion joints, flexible connectors, valves, accessories, heat tracing, insulation, lining and coating, testing, disinfection, excavation, backfill and encasement, to provide a functional installation.
- B. The piping shown is intended to define the general layout, configuration, routing, method of support, pipe size, and pipe type. The mechanical drawings are not pipe construction or fabrication drawings. It is the CONTRACTOR's responsibility to develop the details necessary to construct all mechanical piping systems, to accommodate the specific equipment provided, and to provide and install all spools, spacers, adapters, connectors, etc., for a complete and functional system.

1.03 RELATED WORK

- A. Division 2 as applicable.
- B. Section 02221 - Excavation and Backfilling Utilities
- C. Section 02641 – Valves, General

1.04 REFERENCE STANDARDS

- A. Codes: All codes, as referenced herein are specified in Section 01090, "Reference Standards".
- B. Commercial Standards:

| | |
|-------------------|---|
| ANSI/ASME B1.20.1 | Pipe Threads, General Purpose (inch). |
| ANSI B16.5 | Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and other Special Alloys. |
| ANSI/AWWA C100 | Ductile Iron Pipe |
| ANSI/AWWA C900 | Plastic Pipe |
| ANSI/AWWA C207 | Steel Pipe Flanges for Water Works Service, Sizes 4 inch through 144 inch. |
| ANSI/AWWA C606 | Grooved and Shouldered Joints. |
| ANSI/AWS D1.1 | Structural Welding Code. |
| ASTM A 307 | Specification for Carbon Steel Bolts and |

**SECTION 02610
PIPING, GENERAL**

Studs, 6,000 psi Tensile.

ASTM A 325 Specification for High-Strength Bolts
for Structural Steel Joints.

ASTM D 792 Test Methods for Specific Gravity and
Density of Plastics by Displacement.

ASTM D 2000 Classification System for Rubber
Products in Automotive Applications.

1.05 SUBMITTALS

- A. The CONTRACTOR shall submit complete shop drawings and certificates, test reports, affidavits of compliance, of all piping systems, in accordance with the requirements in Section 01340, "Shop Drawings, Product Data and Samples", and as specified in the individual sections. The shop drawings shall include all necessary dimensions and details on pipe joints, fittings, fitting specials, valves, appurtenances, design calculations, and material lists. The submittals shall include detailed layout, spool, or fabrication drawings which show all pipe spools, spacers, adapters, connectors, fittings, and pipe supports necessary to accommodate the equipment and valves provided in a complete and functional system.
- B. All expenses incurred in making samples for certification of tests shall be borne by the CONTRACTOR.
- C. The CONTRACTOR shall submit as part of the shop drawings a certification from the pipe fabricator stating that all pipes that are fabricated are subject to a recognized Quality Control Program. An outline of the program shall be submitted to the ENGINEER for review prior to the fabrication of any pipe

1.06 QUALITY ASSURANCE

- A. Inspection: All pipes shall be subject to inspection at the place of manufacture. During the manufacture of the pipe, the ENGINEER shall be given access to all areas where manufacturing is in progress and shall be permitted to make all inspections necessary to confirm compliance with the Specifications.
- B. Tests: Except where otherwise specified, all materials used in the manufacture of the pipe shall be tested in accordance with the applicable Specifications and Standards. [Welds shall be tested as specified.] The CONTRACTOR shall perform all tests at no additional cost to the OWNER.
- C. Welding Requirements: All welding procedures used to fabricate pipe shall be pre-qualified under the provisions of ANSI/AWS D1.1. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or spiral welds for pipe cylinders, spigot and bell ring attachments, reinforcing plates and ring flange welds, and plates for lug connections.
- D. Welder Qualifications: skilled welders, welding operators, and tackers who have had adequate experience in the methods and materials to be used shall do all welding. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the pipeline. Machines and electrodes similar to those used in the WORK shall be used in qualification tests. The CONTRACTOR shall furnish all material and bear the expense of qualifying welders.

**SECTION 02610
PIPING, GENERAL**

1.07 MANUFACTURER'S SERVICE REPRESENTATIVE

- A. Where the assistance of a manufacturer's service representative is advisable, in order to obtain perfect pipe joints, supports, or special connections, the CONTRACTOR shall furnish such assistance at no additional cost to the OWNER

1.08 MATERIAL DELIVERY, STORAGE, AND HANDLING

- A. All piping materials, fittings, valves, and accessories shall be delivered in a clean and undamaged condition and stored off the ground, to provide protection against oxidation caused by ground contact. All defective or damaged materials shall be replaced with new materials.

1.09 CLEANUP

- A. After completion of the work, all remaining pipe cuttings, joining and wrapping materials, and other scattered debris, shall be removed from the site. The entire piping system shall be handed over in a clean and functional condition.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All pipes, fittings, and appurtenances shall be furnished in accordance with the requirements of the applicable Sections of Division 2 and as specified herein.
- B. Lining: All requirements pertaining to thickness, application, and curing of pipe lining, are in accordance with the requirements of the applicable Sections of Division 2, unless otherwise specified.
- C. Coating: All requirements pertaining to thickness, application, and curing of pipe coating, are in accordance with the requirements of the applicable Sections of Division 2, unless otherwise specified. Pipes above ground or in structures shall be field-painted as directed by the ENGINEER.

2.02 PIPE FLANGES

- A. Flanges: Where the design pressure is 150 psi or less, flanges shall conform to either ANSI/AWWA C207 Class D or ANSI B16.5 150-lb class. Where the design pressure is greater than 150 psi, up to a maximum of 275 psi, flanges shall conform to ANSI/AWWA C207 Class E, Class F, or ANSI B16.5 150-lb class. However, AWWA flanges shall not be exposed to test pressure greater than 125 percent of rated capacity. For higher test pressures, the next higher rated AWWA flange or an ANSI-rated flange shall be selected. Where the design pressure is greater than 275 psi up to a maximum of 700 psi, flanges shall conform to ANSI B16.5 300-lb class. Flanges shall have flat faces and shall be attached with boltholes straddling the vertical axis of the pipe unless otherwise shown. Attachment of the flanges to the pipe shall conform to the applicable requirements of ANSI/AWWA C207. Flanges for miscellaneous small pipes shall be in accordance with the standards specified for these pipes.
- B. Blind Flanges: Blind flanges shall be in accordance with ANSI/AWWA C207, or with the standards for miscellaneous small pipes. All blind flanges for pipe sizes 12 inches and over shall be provided with lifting eyes in form of welded or screwed eyebolts.

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PIPING, GENERAL**

- C. Flange Coating: All machined faces of metal blind flanges and pipe flanges shall be coated with a temporary rust-inhibitive coating to protect the metal until the installation is completed.
- D. Flange Bolts: All bolts and nuts shall conform to pipe manufacturers recommendations. Studs and bolts shall extend through the nuts a minimum of 1/4-inch. All-thread studs shall be used on all valve flange connections, where space restrictions preclude the use of regular bolts.
- E. Insulating Flanges: Insulated flanges shall have boltholes 1/4-inch diameter greater than the bolt diameter.
- F. Insulating Flange Sets: Insulating flange sets shall be provided where shown. Each insulating flange set shall consist of an insulating gasket, insulating sleeves and washers and a steel washer. Insulating sleeves and washers shall be one piece when flange bolt diameter is 1-1/2-inch or smaller and shall be made of acetal resin. For bolt diameters larger than 1-1/2-inch, insulating sleeves and washers shall be 2-piece and shall be made of polyethylene or phenolic. Steel washers shall be in accordance with ASTM A 325. Insulating gaskets shall be full-face.
- G. Insulating Flange Manufacturers, or approved equal:
 - 1. JM Red Devil, Type E;
 - 2. Maloney Pipeline Products Co., Houston;
 - 3. PSI Products, Inc., Burbank, California.
- H. Flange Gaskets: Gaskets for flanged joints shall be full-faced, 1/16-inch thick compressed sheets of aramid fiber base, with nitrile binder and non-stick coating, suitable for temperatures to 700 degrees F, a pH of one to eleven, and pressures to 1000 psi. Blind flanges shall have gaskets covering the entire inside face of the blind flange and shall be cemented to the blind flange. Ring gaskets shall not be permitted.
- I. Flange Gasket Manufacturers, or approved equal:
 - 1. John Crane, style 2160;
 - 2. Garlock, style 3000.

2.03 MECHANICAL-TYPE COUPLINGS (GROOVED OR BANDED PIPE)

- A. General: Cast mechanical-type couplings shall be provided where shown. The couplings shall conform to the requirements of ANSI/AWWA C606. All gaskets for mechanical-type couplings shall be compatible with the piping service and fluid utilized, in accordance with the coupling manufacturer's recommendations. The wall thickness of all grooved piping shall conform with the coupling manufacturer's recommendations to suit the highest expected pressure. To avoid stress on equipment, all equipment connections shall have rigid-grooved couplings, or harness sets in sizes where rigid couplings are not available, unless thrust restraint is provided by other means. The CONTRACTOR shall have the coupling Manufacturer's service representative verify the correct choice and application of all couplings and gaskets, and the quality of work, to assure a correct installation.
- B. Couplings for Steel Pipe, Manufacturers, or approved equal:
 - 1. Gustin-Bacon (banded or grooved);

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2. Victaulic Style 41 or 44 (banded, flexible);
 3. Victaulic Style 77 or 07 (grooved).
- C. Ductile Iron Pipe Couplings, Manufacturers, or approved equal:
1. EBAA Iron
 2. Romac.
 1. Sigma

Note: Ductile iron pipe couplings shall be furnished with flush seal gaskets.

2.04 SLEEVE-TYPE COUPLINGS

- A. Construction: Sleeve-type couplings shall be provided where shown, in accordance with ANSI/AWWA C219 unless otherwise specified, and shall be of steel with steel bolts, without pipe stop, and shall be of sizes to fit the pipe and fittings shown. The middle ring shall be not less than 1/4-inch in thickness and shall be either 5 or 7 inches long for sizes up to and including 30 inches and 10 inches long for sizes greater than 30 inches, for standard steel couplings, and 16 inches long for long-sleeve couplings. The followers shall be single-piece contoured mill section welded and cold expanded as required for the middle rings. They shall be of sufficient strength to accommodate the number of bolts necessary to obtain adequate gasket pressures without excessive rolling. The shape of the follower shall be of such design as to provide positive confinement of the gasket. Buried sleeve-type couplings shall be epoxy-coated at the factory as specified.
- B. Pipe Preparation: The ends of the pipe, where specified or shown, shall be prepared for flexible steel couplings. Plain ends for use with couplings shall be smooth and round for a distance of 12 inches from the ends of the pipe, with outside diameter not more than 1/64-inch smaller than the nominal outside diameter of the pipe. The middle ring shall be tested by cold-expanding a minimum of one percent beyond the yield point, to proof-test the weld to the strength of the parent metal. The weld of the middle ring shall be subjected to air test for porosity.
- C. Gaskets: Gaskets for sleeve-type couplings shall be rubber-compound material that will not deteriorate from age or exposure to air under normal storage or use conditions. Gaskets for wastewater and sewerage applications shall be Buna "N," grade 60, or equivalent suitable elastomer. The rubber in the gasket shall meet the following specifications:
1. Color - Jet Black
 2. Surface - Non-blooming
 3. Durometer Hardness - 74 ± 5
 4. Tensile Strength - 1000 psi Minimum
 5. Elongation - 175 percent Minimum

The gaskets shall be immune to attack by impurities normally found in water or wastewater. All

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gaskets shall meet the requirements of ASTM D 2000, AA709Z, meeting Suffix B13 Grade 3, except as noted above. All gaskets shall be compatible with the piping service and fluid utilized.

- D. Insulating Couplings: Where insulating couplings are required, both ends of the coupling shall have a wedge-shaped gasket which assembles over a rubber sleeve of an insulating compound in order to obtain insulation of all coupling metal parts from the pipe.
- E. Restrained Joints: All sleeve-type couplings on pressure lines shall be harnessed unless thrust restraint is provided by other means. Harnesses shall be in accordance with the requirements of the appropriate reference standard, or as shown.
- F. Manufacturers or Equal:
 - 1. JCM Industries
 - 2. Hymax
 - 3. Smith-Blair

PART 3 - EXECUTION

3.01 GENERAL

- A. All pipes, fittings, and appurtenances shall be installed in accordance with the requirements of the applicable Section of Divisions 2. The lining manufacturer shall take full responsibility for the complete, final product and its application. All pipe ends and joints at screwed flanges shall be epoxy-coated, to assure continuous protection.
- B. Where core drilling is required for pipes passing through existing concrete, core drilling locations shall be determined by radiograph of concrete construction to avoid damage to embedded raceways and rebars.
- C. All exposed piping shall be painted. All piping to be painted shall be color coded in accordance with OWNER's standard color code. Color samples shall be submitted to ENGINEER for final color selection.

3.02 MEASUREMENT AND PAYMENT

- A. Measurement and payment will be based on the actual quantities installed as more specifically discussed and described in SECTION 01025 for measurement and payment.

END OF SECTION 02610

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Provide all labor, materials, necessary equipment and services to complete the wastewater transmission system work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

1.02 WORK INCLUDED

- A. The CONTRACTOR shall provide all tools, supplies, materials, equipment, and labor necessary for furnishing, epoxy coating, installing, adjusting, and testing of all valves and appurtenant work, complete and operable, in accordance with the requirements of the Contract Documents. Where buried valves are shown, the CONTRACTOR shall furnish and install valve boxes to grade, with covers, extensions, and position indicators.
- B. The provisions of this Section shall apply to all valves and valve operators specified in the various Sections and Division 2 of these Specifications except where otherwise specified in the Contract Documents. Valves and operators in particular locations may require a combination of units, sensors, limit switches, and controls specified in other Sections of these Specifications.

1.03 RELATED WORK

- A. Section 02221 - Excavation and Backfilling for Utilities
- B. Section 02610 - Piping, General

1.04 REFERENCE STANDARDS

- A. Codes: All codes, as referenced herein, are specified in Section 01090, "Reference Standards".
- B. Commercial Standards:

| | |
|-----------------|---|
| ANSI B16.1 | Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800. |
| ANSI B16.5 | Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys. |
| ANSI/ASME B31.1 | Power Piping. |
| ASTM A 36 | Specification for Structural Steel. |
| ASTM A 48 | Specification for Gray Iron Castings. |
| ASTM A 126 | Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings. |
| ASTM A 536 | Specification for Ductile Iron Castings. |
| ASTM B 61 | Specification for Steam or Valve Bronze Castings. |

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VALVES, GENERAL**

| | |
|----------------|---|
| ASTM B 62 | Specification for Composition Bronze or Ounce Metal Castings. |
| ASTM B 148 | Specification for Aluminum-Bronze Castings. |
| ASTM B 584 | Specification for Copper Alloy Sand Castings for General Applications. |
| ANSI/AWWA C500 | Gate Valves for Water and Sewerage Systems. |
| ANSI/AWWA C502 | Dry-Barrel Fire Hydrants. |
| ANSI/AWWA C503 | Wet-Barrel Fire Hydrants. |
| ANSI/AWWA C504 | Rubber-Seated Butterfly Valves. |
| ANSI/AWWA C507 | Ball Valves 6 Inches Through 48 Inches. |
| ANSI/AWWA C508 | Swing-Check Valves for Waterwork Service, 2 Inches Through 24 Inches NPS. |
| ANSI/AWWA C509 | Resilient-Seated Gate Valves for Water and Sewage Systems. |
| ANSI/AWWA C511 | Reduced-Pressure Principle Backflow-Prevention Assembly. |
| ANSI/AWWA C550 | Protective Interior Coatings for Valves and Hydrants. |
| SSPC-SP-2 | Hand Tool Cleaning. |
| SSPC-SP-5 | White Metal Blast Cleaning. |

1.05 SUBMITTALS

- A. Shop Drawings: Shop drawings of all valves and operators including associated wiring diagrams and electrical data, shall be furnished as specified in Section 01340, "Shop Drawings, Product Data and Samples".
- B. Valve Labeling: The CONTRACTOR shall submit a schedule of valves to be labeled indicating in each case the valve location and the proposed wording for the label.

1.06 QUALITY ASSURANCE

- A. Valve Testing: Unless otherwise specified, each valve body shall be tested under a test pressure equal to twice its design water-working pressure.
- B. Bronze Parts: Unless otherwise specified, all interior bronze parts of valves shall conform to the requirements of ASTM B 62, or where not subject to dezincification, to ASTM B 584.
- C. Certification: Prior to shipment, the CONTRACTOR shall submit for all valves over 12 inches in size, certified, notarized copies of the hydrostatic factory tests, showing compliance with the applicable standards of AWWA, ANSI, ASTM, etc.

PART 2 - PRODUCTS

**SECTION 02641
VALVES, GENERAL**

2.01 VALVES, GENERAL

- A. General: The CONTRACTOR shall furnish all valves, gates, valve-operating units, stem extensions, and other accessories as shown or specified. All valves and gates shall be new and of current manufacture. All shut-off valves, 6-inch and larger, shall have operators with position indicators. Where buried, these valves shall be provided with valve boxes and covers containing position indicators, and valve extensions. Shut-off valves mounted higher than 5 feet-6 inches above working level shall be provided with chain operators.
- B. Valve Flanges: The flanges of valves shall be in accordance with Section 02610, "Piping, General".
- C. Gate Valve Stems: Where subject to dezincification, gate valve stems shall be of bronze conforming to ASTM B 62, containing not more than 5 percent of zinc nor more than 2 percent aluminum. Gate valve stems shall have a minimum tensile strength of 60,000 psi, a minimum yield strength of 40,000 psi, and an elongation of at least 10 percent in 2 inches, as determined by a test coupon poured from the same ladle from which the valve stems to be furnished are poured. Where dezincification is not a problem, bronze conforming to ASTM B 584 may be used.
- D. Protective Coating: Except where otherwise specified, ferrous surfaces, exclusive of stainless steel surfaces, in the water passages of all valves 4-inch and larger, as well as the exterior surfaces of all submerged valves, shall be coated with 2 part thermal setting epoxy coatings. Flange faces of valves shall not be epoxy coated. The valve manufacturer shall certify in writing that such coating has been applied and tested in the manufacturing plant prior to shipment, in accordance with these Specifications.
- E. Valve Operators: Where shown, certain valves and gates shall be furnished with electric operators, provided by the valve or gate manufacturer. The same manufacturer shall furnish all operators of a given type. Where different manufacturers supply these operators, the CONTRACTOR shall coordinate their selection to provide uniformity of each type of electric operator. All valve operators, regardless of type, shall be installed, adjusted, and tested by the valve manufacturer at the manufacturing plant.
- F. Valve Labeling: Except when such requirement is waived by the ENGINEER in writing, a label shall be provided on all shut-off valves exclusive of hose bibbs and chlorine cylinder valves. The label shall be of 1/16-inch plastic or stainless steel, minimum 2 inches by 4 inches in size, and shall be permanently attached to the valve or on the wall adjacent to the valve as directed by the ENGINEER. Valve labels shall be photographed and marked on the As-Built Drawings. Valves are also required to have an Identification Marker in accordance with the Contract Documents.
- G. Nuts and Bolts: All nuts and bolts on valve flanges and supports shall be in accordance with manufacturers recommendations. Where submerged or buried, all nuts and bolts on valve flanges and valve bodies shall be stainless steel.

2.02 ECCENTRIC PLUG VALVES

- A. Equipment Requirements: Plug valves shall be of the non-lubricated, eccentric type with resilient faced plugs, port areas for valves 20 inches and smaller shall be at least 80% of full pipe area. Port area of valves 24 inches and larger shall be at least 70% of full pipe area. The body shall be of semi-steel (ASTM A-126 C1.B) and shall have bolted bonnet, which gives access to the intervals of the valve. Seats shall be welded overlay of high nickel content or a stainless

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VALVES, GENERAL

steel plate locked in the body cavity. If a plate is used, it shall be replaceable through the bonnet access. Bearings shall be permanently lubricated of stainless steel, bronze or teflon lined, fiberglass backed duralon. Bearing areas shall be isolated from the flow with grit seals. Valves shall have packing bonnets where the shaft protrudes from the grit seals. Valves shall have packing bonnets where the shaft protruded from the valve and the packing shall be self-adjusting chevron type, which can be replaced without removing the bonnet. All nuts, bolts, springs and washers shall be stainless steel.

- B. Valves shall be designed for a working pressure of 150 PSI. The valve and actuator shall be capable of satisfactory operation in either direction of flow against pressure drops up to and including 100 PSI (for plug valves over 12 inches in diameter). Valves shall be bubble tight in both directions at 100-psi differential.
- C. Plug valves over 12 inches in diameter shall have worm gear operators. The operating mechanism shall be for buried service with a 2 inch square-operating nut.
- D. Plug valves are to be installed with the sear pointed towards the upstream flow, when specified.
- E. Manufacturers or approved equal:
 - 1. Milliken Valve Co.
 - 2. DeZurik Corporation.
 - 3. Henry Pratt

2.05 SWING CHECK VALVES (3-INCH AND LARGER)

- A. General: Swing check valves for sewage, sludge, and general service shall be of the outside lever and spring or weight type, in accordance with ANSI/AWWA C 508 - Swing-Check Valves for Waterworks Service, 2 inch through 24 inch NPS, unless otherwise indicated, with full-opening passages, designed for a water-working pressure of 150 psi. They shall have a flanged cover piece to provide access to the disc.
- B. Body: The valve body and cover shall be of cast iron conforming to ASTM A 126, with flanged ends conforming to ANSI B 16.1, or mechanical joint ends, as shown.
- C. Disc: The valve disc shall be of cast iron, ductile iron, or bronze conforming to ASTM B 62.
- D. Seat and Rings: The valve seat and rings shall be of bronze conforming to ASTM B 62 or B 148, or of Buna-N.
- E. Hinge Pin: The hinge pin shall be of bronze or stainless steel.
- F. Manufacturers or approved equal:
 - 1. AFC.;
 - 2. M& H
 - 3. Danfoss Flo-Flex;
 - 4. Mueller Company;

5. Clow.

2.06 AIR-VACUUM AND AIR-RELEASE VALVES

- A. Air and Vacuum Valves: Air and vacuum valves shall be capable of venting large quantities of air while pipelines are being filled, and allowing air to re-enter while pipelines are being drained. They shall be of the size shown, with flanged or screwed ends to match piping. Bodies shall be of high-strength cast iron. The float, seat, and all moving parts shall be constructed of Type 316 stainless steel. Seat washers and gaskets shall be of a material insuring water tightness with a minimum of maintenance. Valves shall be designed for minimum 150-psi water-working pressure, unless otherwise shown.
- B. Air-Release Valves: Air-release valves shall vent accumulating air while system is in service and under pressure and be of the size shown and shall meet the same general requirements as specified for air and vacuum valves except that the vacuum feature will not be required. They shall be designed for a minimum water-working pressure of 150 psi, unless otherwise shown.
- C. Combination Air Valves: Combination air valves shall combine the characteristics of air and vacuum valves and air release valves by exhausting accumulated air in systems under pressure and releasing or re-admitting large quantities of air while a system is being filled or drained, respectively. They shall have the same general requirements as specified for air and vacuum valves.
- D. Manufacturers or approved equal:
 - 1. H-Tech;
 - 2. Golden-Anderson Valve Division (GA Industries, Inc);
 - 3. Crispin (Valve and Manufacturing Corporation).

2.07 CORPORATION STOPS (Ball Valve Type)

- A. Unless otherwise shown, corporation stops shall be made of brass alloy for key operation, with screwed ends with corporation thread or iron pipe thread, as required. AWWA taper thread for inlet thread and compression type fittings for outlet.
- B. Manufacturer or approved equal:
 - 1. Ford Meter Box Company;
 - 2. Cambridge Brass;
 - 3. Mueller Company.

PART 3 -EXECUTION

3.01 VALVE INSTALLATION

- A. General: All valves, gates, operating units, stem extensions, valve boxes, and accessories shall

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VALVES, GENERAL**

be installed in accordance with the manufacturer's written instructions and as shown and specified. All gates shall be adequately braced to prevent warpage and bending under the intended use. Valves shall be firmly supported to avoid undue stresses on the pipe.

- B. Access: All valves shall be installed to provide easy access for operation, removal, and maintenance and to avoid conflicts between valve operators and structural members or handrails.
- C. Valve Accessories: Where combinations of valves, sensors, switches, and controls are specified, it shall be the responsibility of the CONTRACTOR to properly assemble and install these various items so that all systems are compatible and operating properly. The relationship between interrelated items shall be clearly noted on shop drawing submittals.
- D. Butterfly Valves: All exposed butterfly valves shall be installed with a means of removing the complete valve assembly without dismantling the valve or operator.

3.02 MEASUREMENT AND PAYMENT

- A. Measurement and payment will be based on the actual quantities installed as more specifically discussed and described in SECTION 01025 for MEASUREMENT AND PAYMENT.

END OF SECTION 02641

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. The work included in this section consists of furnishing all labor, supplies, equipment and materials necessary to complete the installation of sod and associated materials herein after listed and as shown on the plans.

1.03 RELATED WORK

1.04 QUALITY ASSURANCE

- A. Sodding work shall be performed by a firm specializing in sodding.
- B. Source Quality Control: Ship sod with certificates of inspection as required by governing authorities.

Do not make substitutions. If specified sod is not obtainable, submit proof of non-availability to ENGINEER, together with proposal for use of equivalent material.

- C. Analysis and Standards: Package standard products with manufacturer have certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

1.05 SUBMITTALS

- A. Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Plant and Material Certifications:
 - 1. Certificate of inspection as required by governmental authorities.
 - 2. Manufacturer's or vendor's certified analysis for soil amendments or fertilizer materials.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.
- B. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying.
- C. Transporting:
 - 1. Sod transported to the project in open vehicles shall be covered with tarpaulin or other suitable covers securely fastened to the body of the vehicle to prevent injury to the sod

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SODDING**

material. Closed vehicles shall be adequately ventilated to prevent overheating of the sod. Evidence of inadequate protection against drying out in transit shall be cause for rejection.

2. Sod shall be kept moist, fresh and protected at all times. Such protection shall encompass the entire period during which the sod is in transit, being handled, or in temporary storage.
3. Upon arrival at the temporary storage location or the site of work, sod shall be inspected for proper shipping procedures. Should the roots be dried out, the ENGINEER will reject the sod. When sod has been rejected, the CONTRACTOR shall remove it at once from the area of the work and replace it.
4. Unless otherwise authorized by the ENGINEER, the CONTRACTOR shall notify the ENGINEER at least 48 hours in advance of the anticipated delivery date of sod material. A legible copy of the invoice, showing species and variety of sod included for each shipment shall be submitted to the ENGINEER. Certificate of Inspection must accompany each sod shipment.

1.07 JOB CONDITIONS

- A. Begin installation of sod after preceding related work is accepted.
- B. Environmental Requirements:
 1. Install sod during months acceptable to the ENGINEER.
 2. Do not install sod on saturated soil.
- C. Protection: Erect signs and barriers to control vehicular traffic.
- D. Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.

1.08 SEQUENCING AND SCHEDULING

- A. Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.
- B. Coordination with sodding: Plant trees, palms and shrubs after final grades are established and prior to planting of sod, unless otherwise acceptable to ENGINEER. If planting of trees, palms and shrubs occurs after sod work, protect sod areas and promptly repair damage to lawns resulting from planting operations.

1.09 SPECIAL PROJECT WARRANTY

- A. Warranty sod through specified lawn maintenance period, and until final acceptance.

PART 2 - PRODUCTS

**SECTION 02910
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2.01 PLANTING SOIL

- A. Provide new planting soil that is fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 1 inch in any dimension, and other extraneous or toxic matter harmful to plant growth.
- B. Obtain planting soil from local sources or from areas having similar soil characteristics to that found at project site.
- C. Refer to Section 162 of the "FDOT Standard Specifications for Road and Bridge Construction" dated 2007 for Topsoil Specifications.

2.02 COMMERCIAL FERTILIZER

- A. For sod, provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 square foot of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. Provide nitrogen in a form that will be available to sod during initial period of growth; at least 50 percent of nitrogen to be organic form.

2.03 SOD

- A. Provide strongly rooted sod, not less than 2 years old, free of weeds and undesirable native grasses, and machine cut to pad thickness of 1-1/2 inch (plus or minus 1/4 inch), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant).
- B. Provide sod uniform pad sizes with maximum 5 percent deviation in either length or width. Broken pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10 percent of pad will be rejected.
- C. Provide sod composed of the following:
 - 1. St. Augustine
 - 2. Bahia
- D. Sod shall be nursery grown on cultivated mineral agricultural soils. Sod shall have been mowed regularly and carefully maintained from planting to harvest.
- E. American Sod Producers Association (ASPA) Grade: Nursery Grown or Approved. Field grown sod is not acceptable.
- F. Furnished in pads:
 - 1. Size:
 - a. Length: 24 inches plus or minus 5%.
 - b. Width: 18 inches plus or minus 5%
 - c. Thickness: 1-1/2 inches excluding top growth and thatch.
 - 2. Not stretched, broken or torn.
- G. Uniformly mowed height when harvested: 2 inches.

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SODDING**

- H. Thatch: Maximum 1/2 inch uncompressed.
 - I. Inspected and found free of disease, nematodes, pests, and pest larvae, by entomologist of State Department of Agriculture.
 - J. Weeds:
 - 1. Free of Bermuda grass, nut grass or other objectionable weeds.
 - K. Uniform in color, leaf texture, and density.
- 2.04 WATER
- A. Water shall be potable, from municipal water supplies or other sources which are approved by a public health department.
- 2.05 FERTILIZER
- A. FS O-F-241c (1), Grade A or B.
 - B. The chemical designation shall be 1-8-8, with at least 50 percent of the nitrogen from a non-water-soluble organic source.
- 2.06 HERBICIDES
- A. As recommended by the State Department of Agriculture.
- 2.07 STAKES
- A. Softwood, 3/4-inch diameter, 8-inch length.

PART 3 - EXECUTION

3.01 PREPARATION OF GROUND SURFACE

- A. Before mixing, clean planting soil of roots, plants, sods, stones, clay lumps, and other extraneous material harmful or toxic to plant growth.
- B. Mix specified fertilizers with planting soil as necessary at rates specified. Delay mixing fertilizer if planting will not allow placing of planting soil within a few days.
- C. For sod, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.

3.02 PREPARATION OF PLANTING BEDS

- A. Loosen subgrade of lawn areas to a minimum depth of 4 inches. Remove stones measuring over 1 1/2 inches in any dimension. Remove sticks, stones, rubbish, and other extraneous matter. Limit preparation to areas, which will be planted promptly after preparation.

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- B. Spread planting soil to minimum depth of 2 inches or as required meeting lines, grades, and elevations shown, after light rolling and natural settlement. Add specified fertilizer and mix thoroughly into upper 4 inches of topsoil.
- C. Place approximately 1/2 of total amount of topsoil required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil. Add specified soil amendments and mix thoroughly into upper 4 inches.
- D. Where sod is to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Till to a depth of not less than 6 inches. Apply fertilizers as specified. Remove high areas and fill in depressions. Till soil to a homogenous mixture of fine texture, free of lumps, clods, stones, roots and other extraneous matter.
- E. Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of OWNER's property. Do not turn existing vegetation over into soil being prepared for lawns.
- F. Allow for sod thickness in areas to be sodded.
- G. Apply specified commercial fertilizer at rates specified and thoroughly mix into upper 2 inches of topsoil. Delay application of fertilizer if lawn planting will not follow within a few days.
- H. Fine grade sod areas to smooth, even surface with loose, uniformly fine texture. Roll, rake, and drag lawn areas, remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas, which can be planted immediately after grading.
- I. Moisten prepared sod areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting lawns. Do not create a muddy soil condition.
- J. Restore sod areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to planting.

3.03 SODDING NEW LAWNS

- A. Lay sod within 24 hours from time of stripping.
- B. Lay sod to form solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass.
- C. Anchor sod on slopes with wood pegs to prevent slippage.
- D. Water sod thoroughly with a fine spray immediately after planting.

3.04 MAINTENANCE

- A. Begin maintenance immediately after planting.
- B. Maintain lawns for not less than 30 days after substantial completion, and longer as required to establish an acceptable lawn.

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- C. Maintain sod by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas.
- D. Mowing:
 - 1. Whenever grass reaches a height of 3 inches, it shall be cut back to 2 inches with all clippings removed.
 - 2. After two mowings, CONTRACTOR shall topdress the sod with an application of fertilizer at the rate of 1 pound of actual nitrogen per 1,000 square feet.

3.05 CLEANUP AND PROTECTION

- A. During sodding work, keep pavements clean and work area in an orderly condition.
- B. Protect sodding work and materials from damage due to landscape operations, operations by other CONTRACTORS and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged sod work as directed.

3.06 INSPECTION AND ACCEPTANCE

- A. Sod areas will be accepted when in compliance with all the following conditions:
 - 1. The roots are thoroughly attached to the soil.
 - 2. Absence of visible joints.
 - 3. All areas show a uniform stand of specified grass in healthy condition.
 - 4. At least 60 days have elapsed since the completion of the work in this section.
- B. When inspected sod work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by ENGINEER and found to be acceptable. Remove rejected plants and materials promptly from project site.
- C. Procedure:
 - 1. The CONTRACTOR shall submit a request for acceptance in writing to the ENGINEER. Request must be received not less than 10 days before the anticipated date for final inspection.
 - 2. Upon completion of all repairs and/or renewals required by ENGINEER at the inspection, the ENGINEER will verify the completeness of the work and then notify the OWNER in writing that the work is accepted.
 - 3. Upon completeness, the OWNER will assume maintenance of all sod areas.

3.07 MEASUREMENT AND PAYMENT

- A. Measurement and payment will be based on actual quantities installed as more specifically discussed and described in SECTION 01025 of MEASUREMENT AND PAYMENT.

END OF SECTION 02910

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the concrete work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".
- B. Including but not necessarily limited to the following:
 - 1. Form work, shoring, bracing and anchorage.
 - 2. Concrete reinforcement and accessories.
 - 3. Cast-in-place concrete.

1.03 RELATED WORK

- A. Section 02510 - Concrete sidewalk
- B. Section 03300 - Cast-in-Place Concrete.
- C. All applicable sections of Division 1, 2, 3 and 4.

1.04 QUALITY ASSURANCE

- A. All work shall be in accordance with ACI 301, latest edition, a copy of which shall be maintained on site.
- B. Requirements of Regulatory Agencies: perform work in accordance with local building and other applicable codes.
- C. Installation: Performed only by skilled laborers with satisfactory record of performance on completed projects of comparable size and quality.
- D. Inspection and Testing:
 - 1. Test Cylinders - As per ASTM C-39.
 - a. Minimum of three (3) concrete test cylinder shall be taken for every 75 or less cubic yards of concrete placed each day.
 - b. Minimum of one (1) slump test shall be taken during any cold weather concreting, and be cured on job site under same conditions as the concrete it represents.
 - 2. Slump Test - As per ASTM C-143.

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- a. Minimum of one (1) slump test shall be taken for each set of test cylinders taken.

1.05 SUBMITTALS

- A. Test Reports: Reports of concrete compression, yield, air content and slump tests.
- B. Certificates:
 - 1. Manufacturer's certification that materials meet specification requirements.
 - 2. Material content per cubic yards of each class of concrete furnished.
 - a. Dry weights of cement.
 - b. Saturated surface-dried weights of fine and course aggregate.
 - c. Quantities, type and name of all mixtures.
 - d. Weight of water.
 - 3. Ready-mix delivery tickets as per ASTM C-94.
- C. Shop Drawings:
 - 1. Show sizes and dimensions for fabrication and placing of reinforcing steel and bar supports.
 - 2. Indicate reinforcement sizes, spaces, locations and quantities or reinforcing steel, and wire fabric, bending and cutting schedules, splicing and supporting and spacing devices.
 - 3. Indicate formwork dimensioning, materials, arrangement of joints and ties.
 - 4. Shop drawings shall be prepared under seal of a Professional Structural Engineer, registered in the State of Florida.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.
- B. Handle and store materials to prevent contamination.

1.07 JOB CONDITIONS

- A. Allowable concrete temperatures:
 - 1. Hot weather: Maximum 90 degrees F as per ASTM C-94.
- B. Do not place concrete during rain, unless protection is provided.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

- A. Materials shall conform to ACI 301, latest edition.

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- B. Plywood forms: Douglas Fir Species, solid one side, form grade, sound undamaged sheets.
- C. Lumber: Southern Pine Species, No. 2 Grade, with grade stamp clearly visible.
- D. Form Ties: Removable, snap-off metal, of fixed and adjustable length, cone ends.
- E. Tubular Column Type: Round, spirally wound laminated fiber material, clearly visible.

2.02 REINFORCING STEEL

- A. Reinforcing steel shall conform to ASTM A615, 60 ksi yield grade billet steel reformed bars; uncoated finish.
- B. Welded steel wire fabric shall conform to ANSI/ASTM A185, plain type; coiled rolls, uncoated finish.

2.03 CONCRETE MATERIALS

- A. Cement: shall conform to ASTM C150, normal Type II Portland, gray color.
- B. Fine and coarse aggregate shall conform to ASTM C33.
- C. Water: clean and not detrimental to concrete.

2.04 ADMIXTURES

- A. Air Entraining: ASTM C-260
- B. Chemical: Type (as required) ASTM C-494.
- C. Fly Ash and Pozzolans: ASTM C-618
- D. Color - Conditioned Concrete: ASTM C-494 and ASTM C-979

2.05 ACCESSORIES

- A. Non-shrink grout: pre-mixed compound with non-metallic aggregate, cement, water reducing and plasticizing agents; capable of minimum compressive strength of 4000 psi.
- B. Construction joints: locate and install construction joints, which are not shown on drawings, so as not to impair strength and appearance of the structure, as acceptable to the ENGINEER. Place construction joints perpendicular to the main reinforcement, continue reinforcement across construction joints.
- C. Expansion joints: shall be a minimum of 3/4-inch thick asphalt impregnated fiberboard as per ASTM D-1751.
- D. Form release agent shall be a colorless material, which will not stain concrete, absorb moisture or impair natural bonding or color characteristics of coating intended for use on concrete.
- E. Water shall be clear and potable.

2.06 CURING MATERIALS

- A. Water shall be clean and potable.
- B. Absorptive mat shall be burlap fabric of 9 oz./sq. yd. clean, roll goods complying with AASHTO M182, Class 3.
- C. Membrane curing compound shall conform to ASTM C309.
- D. Clear Sealer: "Clear Bond" as manufactured by Guardian Chemical Co., Dayton Day-Chem Cure-W (J-9-A) or approved equal.
- E. Color curing compound shall be liquid membrane-forming conforming to ASTM C 309 two-component Lithochrome Colorwax by L.M. Scofield Company, or approved equal, color to match admixture for color-conditioned concrete.

2.07 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94.
- B. Concrete:
 - 1. Compressive strength (28 days): 4000 psi.
 - 2. Slump: 4(±) 1 inch.

PART 3 - EXECUTION

3.01 FORMWORK ERECTION

- A. Verify lines, levels, and measurement before proceeding with formwork.
- B. Hand trimmed sides and bottom of earth forms; remove loose dirt.
- C. Align form joints.
- D. Do not apply form release agent where concrete surfaces receive special finishes or applied coatings, which may be affected by agent.
- E. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors and other inserts.

3.02 REINFORCING

- A. Place, support and secure reinforcement against displacement.

3.03 PLACING CONCRETE

- A. Color Conditioned concrete, when batching, shall not be less than one-third of the capacity of the mixing drum (a minimum of four yards for a ten yard mixer) and will be in full cubic yard increments.
- B. Notify ENGINEER minimum 24-hours prior to commencement of concreting operations.

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CONCRETE

- C. Scratch, float, trowel, broom or belt finish surfaces, as scheduled or indicated on the Drawings.

3.04 TOLERANCES

- A. Provide Class B tolerance to floor slabs according to ACI 301. Pitch to drains 1/4 inch per foot.

3.05 FINISHES FOR EXPOSED SURFACES

- A. Provide exposed surfaces with finishes as called for on the Drawings.

3.06 CONCRETE CURING

- A. Curing for standard grey work after finishing, cure concrete by keeping moist for one (1) week after placement. Floors and vertical surfaces may be sprayed with an approved curing compound to retard evaporation of water, if spraying is not objectionable because of future finishing requirements. Begin curing operations as soon as concrete has attained its initial set. Keep exposed concrete surface moist for at least one (1) week.
- B. Apply a liquid membrane-forming compound, conforming with ASTM C 309, color to match that of the color condition concrete. Apply on flat work immediately after the finishing operation pursuant to the manufacturers recommendations.

3.05 MEASUREMENT AND PAYMENT

- A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete work shall be included in the bid price of any item in the Item Response Form for which concrete products, materials, or appurtenances are required.

END OF SECTION 03010

**SECTION 03100
CONCRETE FORM WORK**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. Formwork for Cast-In-Place Concrete, with shoring, bracing, and anchorage.
- B. Openings for other affected work.
- C. Form accessories.
- D. Stripping forms.

1.03 RELATED WORK

- A. Section 03010 - Concrete.
- B. Section 03200 - Concrete Reinforcement.
- C. Section 03300 - Cast-In-Place Concrete.

1.04 SYSTEM DESCRIPTION

- A. Design, engineer and construct formwork, shoring and bracing to meet design code requirements, so that resultant concrete conforms to required shapes, lines, and dimensions.

1.05 QUALITY ASSURANCE

- A. Construct and erect concrete formwork in accordance with ACI 301 and 347.

1.06 SUBMITTALS

- A. Indicate pertinent dimensions, materials, and arrangement of joints and ties.
- B. Prepare shop drawings under seal of Professional Structural Engineer registered in the State of Florida.
- C. Manufacturers certification that materials meet specification requirements.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials in accordance with manufacturers recommendations.
- B. Deliver form materials in manufacturer's packaging with installation instructions.

**SECTION 03100
CONCRETE FORM WORK**

- C. Store off ground in ventilated and protected area to prevent deterioration from moisture or damage.
- D. Remove packaging from void forms.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

- A. Plywood: Douglas Fir Species; medium density overlaid one side grade; sound, undamaged sheets with straight edges.
- B. Lumber: Southern Pine Species; No. 2 grade; with grade stamp clearly visible.
- C. Tubular Column: Round, of spirally wound laminated fiber type; surface treated with release agent; of size required.

2.02 FORMWORK ACCESSORIES

- A. Form Ties: Snap-off metal of adjustable length; cone type; 1 1/2 inch break back dimension; free of defects that will leave holes no larger than 1-1/4 inches diameter in concrete surface.
- B. Form Release Agent: Colorless material which will not stain concrete, absorb moisture, or impair natural bonding in color characteristics of coating intended for use on concrete.
- C. Fillets for Chamfered Corners: Wood strips or rigid PVC plastic in maximum possible lengths.
- D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required; or strength and character to maintain formwork in place while placing concrete.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify lines, levels, and measurements before proceeding with formwork.

3.02 PREPARATION

- A. Hand-trim sides and bottoms of earth forms; remove loose dirt prior to placing concrete.
- B. Minimize form joints. Symmetrically align joints and make weathertight to prevent leakage of mortar.
- C. Arrange and assemble formwork to permit dismantling, stripping, so that concrete is not damaged during its removal.
- D. Arrange forms to allow stripping without removal of principal shores, where required to remain in place.

3.03 ERECTION

- A. Provide bracing to ensure stability of formwork. Strengthen formwork liable to be overstressed by construction loads.

**SECTION 03100
CONCRETE FORM WORK**

- B. Camber slabs and beams to achieve ACI 301 tolerances.
- C. Provide temporary ports in formwork to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain. Close ports with tight fitting panels, flush with inside face of forms, neatly lifted so that joints will be apparent in exposed concrete surfaces.
- D. Provide expansion strips on external corners of beams and columns, where exposed.
- E. Install void forms. Protect from moisture before concrete placement. Protect from crushing during concrete placement.
- F. Construct formwork to maintain tolerances in accordance with ACI 301.

3.04 APPLICATION OF FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's instructions. Apply prior to placing reinforcing steel, anchoring devices, and embedded items.
- B. Do not apply form release agent where concrete surfaces are scheduled to receive special finishes or applied coverings, which may be affected by agent. Soak contact surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for work embedded in or passing through concrete.
- B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- C. Install accessories in accordance with manufacturer's instructions, level and plumb. Ensure items are not disturbed during concrete placement.

3.06 FORM REMOVAL

- A. Notify ENGINEER prior to removing formwork.
- B. Do not remove forms and shoring until concrete has sufficient strength to support its own weight, and construction and design loads which may be imposed upon it. Remove load-supporting forms when concrete has attained 75 percent of required 28-day compressive strength, provided construction is reshored.
- C. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 degrees F for 24-hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.
- D. Formwork supporting weight of concrete, such as beam soffits, joints, slabs and other structural elements, may not be removed in less than 14 days and until concrete has attained design minimum compressive strength at 28-days. Determine potential compressive strength of in-place concrete by testing field-cured specimens representative of concrete location of members.

**SECTION 03100
CONCRETE FORM WORK**

- E. Reshore structural members due to design requirements or construction conditions to permit successive construction.
- F. Remove formwork progressively so no unbalanced loads are imposed on structure.
- G. Do not damage concrete surfaces during form removal.
- H. Store reusable forms for exposed architectural concrete to prevent damage to contact surfaces.
- I. Remove formwork in same sequence as concrete placement to achieve similar concrete surface coloration.

3.07 CLEANING

- A. Clean forms to remove foreign matter as erection proceeds.
- B. Ensure that water and debris drain to exterior through clean-out ports.

3.08 MEASUREMENT AND PAYMENT

- A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete formwork shall be included in the bid price of any item in the Item Response Form for which concrete formwork is required.

END OF SECTION 03100

**SECTION 03200
CONCRETE REINFORCEMENT**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. Reinforcing steel bars, welded steel wire fabric, fabricated steel bar or rod mats for cast-in-place concrete.
- B. Support chairs, bolsters, bar supports, spaces, for supporting reinforcement.

1.03 RELATED WORK

- A. Section 03010 - Concrete.
- B. Section 03100 - Concrete Formwork.
- C. Section 03300 - Cast-In-Place Concrete.

1.04 QUALITY ASSURANCE

- A. Perform concrete reinforcement work in accordance with CRSI Manual and Standard Practice, and Documents 63 and 65.
- B. Conform to ACI 301.

1.05 SUBMITTALS

- A. Indicate sizes, spacings, locations and quantities of reinforcing steel, bending and cutting schedules, splicing, stirrup spacing, supporting and spacing devices.
- B. Prepare shop drawings under seal of Professional Structural ENGINEER registered in the State of Florida.
- C. Submit mill test certificates and supplied concrete reinforcing, indicating physical and chemical analysis.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Reinforcing Steel: ASTM A615, 60-ksi-yield grade billet-steel, deformed bars, uncoated finish.
- B. Welded Steel Wire Fabric: ANSI/ASTM A185 plain type; in coiled rolls; uncoated finish.
- C. Stirrup Steel: ANSI/ASTM A82.

2.02 ACCESSORY MATERIALS

- A. Tie Wire: Minimum 16 gauge annealed type.

SECTION 03200
CONCRETE REINFORCEMENT

- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during installation and placement of concrete, including load bearing pad on bottom to prevent vapor barrier puncture.
- C. Chairs, Bolsters, Bar Supports, Spacers Adjacent to Architectural Concrete Surfaces: Plastic coated or stainless steel type; sized and shaped as required.

2.03 FABRICATION

- A. Fabricate in accordance with ACI 315, providing concrete cover specified in Section 03300.
- B. Locate reinforcing splices not indicated on Drawings at points of minimum stress. Indicate location of splices on shop drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Before placing concrete, clean reinforcement of foreign particles or coatings.
- B. Place, support, and secure reinforcement against displacement. Do not deviate from alignment or measurement.
- C. Do not dispose or damage vapor barrier required by Section 03300.

3.02 MEASUREMENT AND PAYMENT

- A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete reinforcement work shall be included in the bid price of any item in the Item Response Form for which concrete reinforcement is required.

END OF SECTION 03200

**SECTION 03300
CAST-IN-PLACE CONCRETE**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the Cast-In-Place Concrete Work, as indicated on the drawings, as specified herein or both except as for items specifically indicated as "NIC ITEMS".
- B. Including but not necessarily limited to the following:
 - 1. Cast-In-Place concrete walls, footings, foundation walls, paving, walks, slabs, formwork, reinforcing and all other components as indicated on the Drawings.

1.03 RELATED WORK

- A. Section 03010 - Concrete.
- B. Section 03100 - Concrete Form work.
- C. Section 03200 - Concrete Reinforcement.
- D. Section 03370 - Concrete Curing.
- E. Section 02510 - Concrete Sidewalk

1.04 QUALITY ASSURANCE

- A. Applicator Qualifications: Minimum of five years experience on 5 comparable concrete projects.
- B. Requirements of Regulatory Agencies: Perform work in accordance with local building codes.
- C. Allowable Tolerances: Flat work true to plane 1/8 inch in 10 feet.
- D. Slump tests as per ASTM C-143, and test cylinders as per ASTM C-39.

1.05 TESTS

- A. Submit proposed mix design of each class of concrete to appointed firm for review prior to commencement of work.
- B. Testing firm will take cylinders and perform slump and air entrainment tests in accordance with ACI 301.
- C. Tests of cement and aggregates will be performed to ensure conformance with requirements stated herein.

**SECTION 03300
CAST-IN-PLACE CONCRETE**

- D. Three (3) concrete test cylinders will be taken for every 75 cubic yards. or less of each class of concrete placed each day.
- E. One (1) slump test will be taken for each set of test cylinders taken.
- F. All testing shall be at the expense of the CONTRACTOR.

1.06 SUBMITTALS

- A. Provide product data for specified products.
- B. Test Reports: Reports of concrete compression, yield, air content, and slump tests.
- C. Certificates:
 - 1. Manufacturer's certification that materials meet specification requirements.
 - 2. Material content per cubic yard of each class of concrete furnished.
 - a. Dry weights of cement.
 - b. Saturated surface-dried weights of fine and coarse aggregate.
 - c. Quantities, type and name of admixtures.
 - d. Weight of water.
 - 3. Ready-mix delivery tickets, ASTM C-94.
- D. Shop Drawings:
 - 1. Show sizes and dimensions for fabrication and placing of reinforcing steel and bar supports.
 - 2. Indicate bar schedules, stirrup spacing, and diagrams of bend bars.
 - 3. Detail items of form systems affecting appearance of architectural concrete surfaces such as joints, tie holes, liners, patterns and textures. Show items in relation to entire form system.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.
- B. Handle and store materials to prevent contamination.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Allowable concrete temperatures:
 - Hot Weather: Maximum 90° F as per ASTM C-94.
- B. Do not place concrete during rain, unless protection is provided.

PART 2 - PRODUCTS

2.01 MATERIALS & MANUFACTURERS

- A. Concrete Ready-Mix concrete ASTM C-94.
 - 1. Cement:
 - a. ASTM C 150, Type II
 - 2. Admixtures:
 - a. Air entraining: ASTM C-260
 - b. Chemical: Type (as required) ASTM C-494.
 - c. Fly ash and pozzolans: ASTM C-618
 - d. Vapor Barrier: 6-mil thick film of type recommended for below grade application.
 - 3. Coarse aggregate: Not less than 50% clean, hard, crushed stone conforming to requirements of Table 2, size number 467 ASTM C-33.
 - 4. Slump 4 inch maximum; plus tolerance 0, minus tolerance 1 inch.
 - 5. Air content: 5% + 1%.
 - 6. Mix proportioning:
 - a. In accordance with ASTM C-94.
 - b. 28 day compressive strength of moist cured laboratory samples 4,000 PSI.
 - c. Use set retarding admixtures during hot weather only when approved by ENGINEER.
 - d. Minimum cement contents 5 sacks/cubic yards.
 - e. Add air-entraining agent to concrete work exposed to exterior.
 - 7. Curing Material: Liquid membrane, ASTM C-309, Type 1.
 - 8. Mixes:
 - a. ASTM C-94.
 - b. Mix concrete only in quantities for immediate use.
 - c. Do not retemper or use set concrete.
- B. Bars.
 - 1. Deformed billet steel: ASTM A 615, Grade 60.
- C. Wire Fabric:
 - 1. Welded Wire Fabric Steel: ASTM A 185
- D. Tie Wire: FS QQ-W-461-G, annealed steel, black 16 ga. minimum.
- E. Bar supports: Conform to "Bar Support Specification," CRSI Manual of Standard Practice.

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F. Forms:

1. Conform with ACI 347, Chapter 3, Material and Form Work.
2. Lumber:
 - a. Softwood framing lumber: Kiln dried, PS-20.
 - b. Boards less than 1 1/2 inch thick and 2 inch wide, used for basic forms and form liners: Kiln dried.
 - c. Grade marked by grading rules agency approved by American Lumber Standards Committee.
 - d. Light framing or studs for board or plywood forms, 2 inch to 4 inch width and thickness Construction Standard grade.
 - e. Boards for basic forms Construction Standard grade.
 - f. Board surface: Smooth.
3. Plywood:
 - a. Exterior type softwood plywood, PS 1-66.
 - b. Each panel stamped or branded indicating veneer grades, species, type and identification.
 - c. Wood faced plywood for architectural concrete surfaces.
 - (1). Panel veneer grades: B - C.
 - (2). Mill-oiled sides and mill-sealed edges of panels.
4. Ties:
 - a. Materials: Stainless Steel.
 - b. Type: Snap Ties.
 - c. Depth of breakback: 1 inch.
 - d. Maximum diameter 1/4 inch.
5. Form coatings:
 - a. Non-staining type.
 - b. Agent: Pine oil derivative.

G. Water: Clean and potable.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Conform to ACI 347, Chapter 2, Construction; and Article 4.2, architectural Concrete.

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- B. Framing, Bracing and Plywood Form Liners: APA Form V 345-72.
- C. Provide temporary openings in framework for concrete placement.
- D. Fill voids of plywood joints with sealant and tool smooth.
- E. CONTRACTOR is responsible for the design, construction, removal and complete safety of formwork and shoring.
- F. Form construction shall be provided to shape, lines dimensions of members shown; substantial, tight enough to prevent leakage, and properly braced or tied to maintain position and size, form sides and bottoms of members unless specifically excepted.

3.02 REINFORCING

- A. Fabrication shall be provided to latest ACI Manual of Practice ACI-315.
- B. Reinforcing free from excessive rust, scale or coating reducing bond. Bars bent cold in fabrication plant. Chairs, support bars, and other accessories furnished to carry and provide coverage as required by ACI Manual.
- C. Unless otherwise indicated the minimum coverage is 3 inch for footings (slabs to have 3/4 inch minimum). Call any "crowding" of reinforcement to ENGINEERs attention during placing.
- D. Splices shall be Mesh 6 inch lap, bars 30 X diameter minimum.
- E. Conduit or pipes embedded in concrete must have specific approval and be located to avoid cracking or reduction in strength. Provide extra strong pipe sleeves where pipes are allowed to pierce concrete beams or walls.
- F. Placement:
 - 1. Bar supports: CRSI 65.
 - 2. Reinforcing bars: CRSI 63.
- G. Steel Adjustment:
 - 1. Move within allowable tolerances to avoid interference with other reinforcing steel, conduits, expansion joints, or embedded items.
 - 2. Do not move bars beyond allowable tolerances without concurrence of ENGINEER.
 - 3. Do not heat, bend or cut bars without concurrence of ENGINEER.
- H. Splices:
 - 1. Lap splices: Tie securely with wire to prevent displacement of splices during placement of concrete.
 - 2. Splice devices: Install in accordance with manufacturer's written instructions.

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CAST-IN-PLACE CONCRETE**

3. Welding: Perform in accordance with AWS Standards.
4. Do not splice bars except at locations shown on drawings without concurrence of ENGINEER.

I. Wire Fabric:

1. Install in longest practicable length.
2. Lap adjoining pieces one full mesh minimum, and lay splices with 16-gauge wire.
3. Offset end laps in adjacent widths to prevent continuous laps.

J. Cleaning: Remove dirt, grease, oil, loose mill scale, excessive rust, and foreign matter that will reduce bond with concrete.

K. Protection During Concreting: Keep reinforcing steel in proper position during concrete placement.

3.03 JOINTS

A. Construction pours shall be continuous pours except where joints are indicated. No additional joints except by special acceptance in writing by the ENGINEER. Allow no construction or interrupted pour joints in any exposed surface, unless treated as part of design.

1. Where indicated and as detailed, provide saw cut type construction joints of sizes as called for on the drawings.

B. Expansion joints shall be constructed as shown on drawings.

1. Expansion material shall be ½ inch continuous full depth strips set ½ inch below finish surface with ½ inch x ½ inch joint sealant filler above.

3.04 BUILT-IN ANCHORING DEVICES, FIXTURES, PIPE SLEEVES AND OTHER INSERTS

A. Build-in and coordinate as required and called for on the drawings all items to be constructed into concrete such as anchoring devices, fixtures, piping, sleeves and other inserts and items as required for a complete installation.

3.05 INSPECTION

A. Assure that excavation and formwork are completed, with smooth rubbed finish, and that excess water is removed.

B. Check that reinforcement is secured in place.

C. Verify that expansion joint material, anchors, and other embedded items are secured in position.

D. Verify anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, held securely, and will not cause hardship in placing concrete.

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3.06 CONCRETE QUALITY

- A. Design of mix shall be a laboratory designed mix to satisfy the following requirements and shall be approved by the ENGINEER.
 - 1. Ready mixed concrete as per ASTM C-94 with 28 day strength 4,000 PSI minimum, for all standard grey concrete work.
 - 2. Proportion the concrete to work readily into forms and around reinforcement, without excessive manipulation, segregation or water gain. Approved additives may be used to achieve the above results.
 - 3. Slump shall be maximum 3 inch for footings, and for all other concrete shall be 3 inch to 5 inch.
 - 4. Submit for approval representative test results by independent laboratory to substantiate proposed mix design.

3.07 PREPARATION FOR POURS

- A. Notify the OWNER's Representative, ENGINEER and other inspectors at least 36 hours prior to inspection.
- B. Equipment forms, and reinforcing shall be clean and wet down, reinforcing firmly secured in place, runways set up and not resting on or displaying reinforcing.
- C. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Apply bonding agent in accordance with manufacturer's instruction.
- D. At locations where new concrete is dowelled to existing work, drill holes in existing concrete, insert steel dowels, and pack solid with non-shrink grout.

3.08 PLACING

- A. Mixing and conveying shall be as per ASTM C-94 and as follows:
 - 1. Maximum elapsed time from addition of water to placing in forms -60 minutes, (total mixing time).
 - 2. Concrete handled and placed by methods, which keep concrete plastic, prevent separation of materials, and do not displace reinforcement.
- B. Deposit as close as possible to final position to avoid segregation of materials. Restrict drop to 3 ft maximum (less for exposed concrete), using tremie if necessary.
 - 1. Compact by mechanical vibration to thoroughly work around reinforcing and eliminate honeycomb.
- C. Place concrete in accordance with ACI 301.
- D. Hot Weather Placement: ACI 301.
- E. Cold Weather Placement: ACI 301.

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CAST-IN-PLACE CONCRETE**

- F. Ensure reinforcement, inserts, embedded parts and formed joints are not disturbed during concrete placement.
- G. Maintain concrete cover around reinforcing as follows:

| <u>Item</u> | <u>Coverage</u> |
|--|-----------------|
| Beams | 1 1/2 inch |
| Supported Slabs | 3/4 inch |
| Column Ties | 1 1/2 inch |
| Walls (exposed to weather or backfill) | 2 inch |
| Footings and Concrete Formed Against Earth | 3 inch |
| Slabs on Fill | 2 inch |

- H. Place concrete continuously between predetermined construction and control joints. Do not break or interrupt successive pours such that cold joints occur.
- I. Saw cut control joints at an optimum time after finishing. Use 3/16 inch thick blade, cutting 1/3 depth of slab thickness.
- J. Separate exterior slabs on fill from vertical surfaces with joint filler. Extend joint filler from bottom of slab to within 1/2 inch of finished slab surface.
- K. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify ENGINEER upon discovery.

3.09 CONCRETE CURING

- A. Curing for standard grey work after finishing, cure concrete by keeping moist for one (1) week after placement. Floors and vertical surfaces may be sprayed with an approved curing compound to retard evaporation of water, if spraying is not objectionable because of future finishing requirements. Begin curing operations as soon as concrete has attained its initial set. Keep exposed concrete surface moist for at least one (1) week.
- B. Apply a liquid membrane-forming compound, conforming to ASTM C 309, color to match that of the color condition concrete. Apply on flat work immediately after the finishing operation pursuant to the manufacturers recommendations.

3.10 CONCRETE FINISHING

- A. Unexposed concrete work shall be patched and repaired immediately after removal of forms.
 - 1. Cut off metal ties a minimum of 1 inch back from surface of concrete.
 - 2. Moderate honeycomb cut out and prepared for patching. Severe honeycomb with exposed steel reinforcing is to be removed or "united" at the discretion of the ENGINEER.
 - 3. Wet areas for patching and pack carefully with rich mortar rubbed to match surface.
- B. Provide concrete surfaces to be left exposed, walls, columns, beams, with smooth rubbed finish.

SECTION 03300
CAST-IN-PLACE CONCRETE

- C. Provide Class B tolerances to floor slabs and toppings according to ACI 301.
- D. Pitch to drains 1/4 inch per foot.
- E. Exposed concrete work shall be patched and repaired as accepted by ENGINEER after consultation. Patching and rubbing will be kept to a minimum if possible, but when necessary will be done with great care to obtain maximum degree of matching in color and texture to adjacent finished concrete surfaces.
- F. Monolithic finish using care to obtain a level surface; floors out of level or with variation greater than 1/8 inch in 10 feet shall be corrected.
- G. All finishes shall be as called for on the drawings.

3.11 SEPARATE FLOOR TOPPINGS

- A. Prior to placing, roughen concrete base course and remove foreign materials. Broom and vacuum clean.
- B. Place dividers, edge strips, reinforcing and other items to be cast in.
- C. Apply bonding agent on base course in accordance with manufacturer's instructions. Apply sand and cement slurry coat on base course immediately prior to placing toppings.
- D. Place concrete floor toppings to required lines and levels.

3.12 PATCHING

- A. Notify ENGINEER immediately upon removal of forms.
- B. Patch imperfections.

3.13 DEFECTIVE CONCRETE

- A. Modify or replace concrete not conforming to required levels and lines, details, and elevations.
- B. Repair or replace concrete not properly placed or of the specified type.

3.14 FIELD QUALITY CONCRETE

- A. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.15 PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. During curing period, protect concrete from damaging mechanical disturbances, water flow, loading, shocking, and vibration.

SECTION 03300
CAST-IN-PLACE CONCRETE

3.16 APPLICATION OF BOND COAT FOR CONCRETE LEVELING COAT FOR PAVERS AND TEXTURED SURFACES

- A. Provide installation as per manufacturer's standard printed specifications, instructions and recommendations.

3.17 MEASUREMENT AND PAYMENT

- A. No separate measurement and payment is provided for work covered by this Section. All cast in place concrete shall be included in the bid price of the relevant item in the Item Response Form.

END OF SECTION 03300

**SECTION 03370
CONCRETE CURING**

PART 1 - GENERAL

1.01 **RELATED DOCUMENTS**

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 **WORK INCLUDED**

- A. Maintenance of conditions for proper concrete curing.

1.03 **RELATED WORK**

- A. Section 02510 - Concrete Sidewalk
- B. Section 03010 - Concrete
- C. Section 03300 - Cast-in-Place Concrete

1.04 **QUALITY ASSURANCE**

- A. Conform to requirements of ACI 301.

1.05 **REFERENCES**

- A. ACI 301 - Specifications for Structural Concrete for Buildings.
- B. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete.

1.06 **SUBMITTALS**

- A. Provide product data for specified products.

1.07 **ENVIRONMENTAL REQUIREMENTS**

- A. Maintain ambient temperature at 70 degrees F for three (3) days.

PART 2 - PRODUCTS

2.01 **MATERIALS**

- A. Water: Clean and not detrimental to concrete.
- B. Absorptive Mat: Burlap fabric of 9 ounce per square yard clean, roll goods.
- C. Curing Compound: As per ASTM C309.

PART 3 - EXECUTION

3.01 **INSPECTION**

- A. Verify concrete surfaces are ready for curing.

**SECTION 03370
CONCRETE CURING**

3.02 CURING COMPOUND

- A. Apply curing compound in two (2) coats with second coat at right angles to first.
- B. Apply in accordance with manufacturer's instructions.

3.03 SPRAYING

- A. Spray water over slab areas; maintain wet for three (3) days.

3.04 ABSORPTIVE MAT

- A. Saturate burlap side of burlap fabric mat. Place over slab areas, burlap side down; lap edges and ends 12 inches. Maintain in place for seven (7) days.

3.05 CONCRETE CURING

- A. Curing for standard grey work after finishing, cure concrete by keeping moist for one (1) week after placement. Floors and vertical surfaces may be sprayed with an approved curing compound to retard evaporation of water, if spraying is not objectionable because of future finishing requirements. Begin curing operations as soon as concrete has attained its initial set. Keep exposed concrete surface moist for at least one (1) week.
- B. Apply a liquid membrane-forming compound, conforming with ASTM C 309, color to match that of the color condition concrete. Apply on flat work immediately after the finishing operation pursuant to the manufacturers recommendations.
- C. Cure concrete as scheduled or indicated.
- D. Remove absorptive mat after curing.

3.06 MEASUREMENT AND PAYMENT

- A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete curing shall be included in the bid price of any item in the Item Response Form for which concrete curing is required.

END OF SECTION 03370

SECTION 05005
DIESEL-ELECTRIC STANDY POWER SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide, install, and acceptance test a complete and operable standby electric generating system, including all devices and equipment specified herein, as shown on the drawings, and as required for the service. Materials and equipment shall be new, and delivered to the job site factory tested and ready for installation.
- B. Generator set ratings shall be 400kW @ 0.8 p.f., 480/277V, 3 phase, four wire, wye connected. Output capacity shall be maintained up to 500 feet elevation and at ambient temperatures between 40 and 120 degrees F.
- C. The system shall include the following:
 - 1. 1 engine-generator set, with accessories
 - 2. Automatic Transfer Switch
 - 3. Starting batteries
 - 4. Battery Charger, 10 amp rating
 - 5. Other control devices, accessories, tests, documents, and services as needed to meet specifications.
- D. Furnish the following items for the generator set:
 - 1. Exhaust silencer, hospital grade, flanges, wall thimble, and flexible exhaust pipe section, sized as required for the engine and installation. All exhaust materials shall be 316 stainless steel.
 - 2. Sound attenuated, weatherproof enclosure as specified herein.
 - 3. Sub-base fuel tank with automatic controls as specified herein.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Equipment and equipment installation shall meet all applicable state and local codes. Equipment supplied shall meet or exceed requirements of the following, as applicable:
 - NFPA 70 National Electrical Code
 - NFPA 110 Emergency and Standby Power Systems
 - NFPA 37 Installation of Stationary Engines
- B. It is intended that all products specified herein be of standard ratings, therefore the kW and kVA ratings, ampere ratings, withstand and closing ratings, etc., shall be the manufacturer's next larger size or rating when the specifications cannot be exactly met.

1.03 SUBMITTALS

- A. Shop Drawings: For all equipment specified, provide the following:

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DIESEL-ELECTRIC STANDY POWER SYSTEM

1. Specification and data sheets showing ratings and derating schedules, operating performance, weights, fuel consumption rates, ventilation and combustion air requirements, exhaust flow data, cooling system data, and engine and generator data, including generator breaker information.
2. Manufacturer's certification of generator set prototype testing. Transfer switch withstand and closing ratings with overcurrent device specifications.
3. Manufacturer's warranty documents and statements accepting warranty responsibility as specified herein for all equipment.
4. Itemized list of all exceptions taken to this specification.
5. Plan and elevation views with certified overall and interconnection point dimensions.
6. Electrical interconnection wiring diagrams showing all external connections required; with terminal and destination markings for all equipment, controls, and devices included in the system.
7. Manufacturer's installation, operating, and maintenance instructions.
8. All accessory equipment information.

1.04 APPROVAL

- A. Supplier: All standby electrical generating system equipment shall be provided and tested by a single supplier who is an authorized representative of the generator set engine manufacturer. This representative shall maintain parts and service facilities, including factory trained mechanics and 24 hour service availability, for the unit supplied within 100 miles of the project site.

Approved Engine Manufacturers/System Suppliers:

1. Caterpillar by Pantropic Power Products, Inc.
 2. Cummins/Onan by Cummins Southeastern Power, Inc. or OK Generators
 3. Detroit Diesel by Florida Detroit Diesel-Allison.
- B. Warranty: The complete electrical power system (generator set, controls, and associated switches, switchgear and accessories), as provided by the single source supplier, shall be warranted by the manufacturer against defects in materials and workmanship for a period of five years or 1500 hours, whichever occurs first from the date of system start-up. Coverage shall include parts, labor, travel expenses, and labor to remove/reinstall the equipment, per the manufacturer's standard published limited warranty. There shall be no deductibles applied to the warranty.

PART 2 - PRODUCTS

2.01 DIESEL ENGINE-GENERATOR SET

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DIESEL-ELECTRIC STANDY POWER SYSTEM

- A. Performance: The generator set manufacturer shall verify the diesel engine as capable of driving the generator with all accessories in place and operating at the generator set kW rating after derating for the range of temperatures expected in service and the altitude of the installation. The manufacturer shall provide documentation demonstrating satisfactory prototype test results for the model specified and production test results for equipment supplied for this project. Generator sets that have not been factory tested at 0.8 PF will not be acceptable. Voltage regulation shall be +/- 0.5 percent of rated voltage for any constant load between no load and rated load. Frequency regulation shall be isochronous from steady state no load to steady state rated load. Total Harmonic Distortion; the sum of AC voltage waveform harmonics, from no load to full linear load, shall not exceed 5% of rated voltage (L-N, L-L, L-L-L) and no single harmonic shall exceed 3% of rated voltage. Telephone Influence Factor; TIF shall be less than 50 per NEMA MG1-22.43. The diesel engine-generator set shall be capable of single step load pick up of 100% nameplate kW and power factor, less applicable derating factors, with the engine-generator set at operating temperature.
- B. After an initial instantaneous voltage dip not to exceed 20 percent, the generator set shall be capable of sustaining a minimum of 90% of rated no load voltage with the specified kVA load at near zero power factor applied to the generator set. Maximum frequency dip shall not exceed 10 percent. Maximum recovery time shall be three seconds.
- C. AC Generator: AC generator, exciter and voltage regulator shall be designed and manufactured by the engine-generator set manufacturer as a complete generator system. The AC generator shall be; synchronous, four pole, revolving field, drip-proof construction, single pre-lubricated sealed bearing, air cooled by a direct drive centrifugal blower fan, and directly connected to the engine with flexible drive disc(s). The stator shall have skewed laminations of insulated electrical grade steel, two-thirds pitch windings. The rotor shall have amortisseur (damper) windings. The rotor shall be dynamically balanced. The exciter shall be brushless, three phase, with full wave silicon diodes mounted on the rotating shaft and a surge suppressor connected in parallel with the field winding. All insulation system components shall meet NEMA MG1 standard temperature limits for Class H insulation system. Actual temperature rise measured by resistance method at full load shall not exceed 105 degrees Centigrade. The generator shall be broad range, 12 lead reconnectable. The generator shall be capable of delivering rated output (kVA) at rated frequency and power factor, at any voltage within the broad range. The main generator and exciter insulation systems must be suitably impregnated for operation in severe environments for resistance to sand, salt, and sea spray.
- D. Provide a 120V, single phase, 60 Hz, 200 watt minimum space heater for the generator windings. Provide the appropriate control such that the heater is on when the generator set is off and off when the generator set is on.
- E. A permanent magnet generator (PMG) shall provide excitation power to the automatic voltage regulator for immunity from voltage distortion caused by non-linear SCR controlled loads on the generator. The PMG shall sustain main field excitation power for optimum motor starting and to sustain short circuit current at approximately 300% of rated current for approximately 10 seconds. The automatic voltage regulator shall be temperature compensated, solid-state design. The voltage regulator shall be equipped with three-phase RMS sensing. The regulator shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. Overvoltage protection shall sense the AC generator output voltage and in the event of regulator failure or loss of reference, shut down regulator output on a sustained overvoltage of one (1) second duration. Overexcitation protection shall sense regulator output and shut down regulator output if overloads exceed ten (10) seconds duration. Both overvoltage and overexcitation protection shutdowns shall be latched, requiring the AC generator to be stopped for reset. The regulator shall include an under frequency rolloff torque-matching characteristic,

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which shall reduce output voltage in proportion to frequency below a threshold of 58-59 HZ. The torque-matching characteristic shall include differential rate of frequency change compensation to use maximum available engine torque and provide optimal transient load response. Regulators which use a fixed volts per hertz characteristic are also acceptable provided that the specified response characteristics are met.

- F. Engine-Generator Set Control: The control shall have a 3 position selector switch with automatic remote start capability. A panel mounted switch shall stop the engine in the STOP position, start and run the engine in the RUN position, and allow the engine to start and run by closing a remote contact, and stop by opening the remote contact when in the REMOTE position. The control shall include a cycle cranking function. The cranking cycle, nonadjustable, shall consist of an automatic crank period of approximately 15 seconds duration followed by a rest period of approximately 15 seconds duration. Cranking shall cease upon engine starting and running. Two separate means of cranking termination shall be provided, one completely redundant to the other with no common components. Failure to start after three cranking attempts (75 seconds) shall shut down and lockout the engine, and visually indicate an overcrank shutdown on the panel. The control shall shut down and lock out the engine upon: failing to start after the specified time (overcrank), overspeed, low lubricating oil pressure, low oil level, high lube oil temperature, high engine temperature, low coolant level, low fuel level, generator breaker trip, or operation of a remote manual stop station. The control shall provide an engine monitor. A panel mounted switch shall reset the engine monitor and test all the lamps. Lamp indications on the control panel shall include:

1. Overcrank shutdown - red
2. Overspeed shutdown - red
3. Low oil pressure shutdown - red
4. Low oil level shutdown - red
5. High oil temperature shutdown - red
6. High engine temperature shutdown - red
7. Low coolant level shutdown - red
8. Generator breaker trip shutdown - red
9. High engine temperature prealarm - yellow
10. Low engine oil pressure prealarm - yellow
11. Low coolant temperature - yellow
12. Low fuel - yellow
13. Fuel leak - red
14. Run - green
15. Not in automatic start - flashing red
16. Auxiliary (2 each) - red

The engine-generator set starting battery(ies) shall power the monitor. The control shall include surge suppression for protection of solid state components. Operation of shut down circuits shall be independent of indication and prealarm circuits. Individual relay signals shall be provided for each indication for external circuit connections (not to exceed ½ amp draw). A common alarm contact for external connection shall be provided. Provide output status contacts (N.O.) for remote use for the following: Low fuel level, fuel leak, generator run (One (1) N.O. & One (1) N.C.).

- G. A NEMA 12 enclosed control panel shall be mounted on the generator set with vibration isolators. A front control panel illumination lamp with ON/OFF switch shall be provided. Control panel mounted indicating meters and devices shall include:

1. Engine Oil Pressure Gauge

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2. Coolant Temperature Gauge
3. DC Voltmeter
4. Running Time Meter (hours)
5. Voltage adjusting rheostat, locking screwdriver type, to adjust voltage +/- 5% from rated value
6. Analog AC Voltmeter, dual range, 90 degree scale, 2% accuracy
7. Analog AC Ammeter, dual range, 90 degree scale, 2% accuracy
8. Analog Frequency/RPM meter, 45-65 Hz, 1350-1950 RPM, 90 degree scale, +/- 0.6 Hz accuracy
9. Seven position phase selector switch with OFF position to allow meter display of current and voltage in each generator phase.

When supplied with reconnectable generators, the meter panel shall be reconnectable for the voltage specified.

- H. Engine: The engine shall be 4 cycle, 1800 rpm, diesel fueled, direct injection, with forged steel crankshaft and connecting rods. An electronic governor; consisting of a magnetic pickup speed sensor, adjustable electronic control, and an electric actuator mounted integrally with the fuel pump, shall provide automatic engine-generator set frequency regulation adjustable from isochronous to 5% droop. The governor shall be suitable for paralleling future generator sets with the addition of load sharing controls. The engine shall be cooled by a unit-mounted closed loop radiator system including belt-driven pusher fan, coolant pump and thermostat temperature control. The cooling system shall be rated for full rated load operation in 120 degrees F ambient condition with the ambient temperature as measured at the generator air inlet. The cooling capability of the generator set shall be demonstrated by prototype tests on a representative generator set model. These tests will be conducted by the generator set manufacturer; calculated data from the radiator manufacturer only is not sufficient. Radiators shall be provided with a duct adaptor flange permitting the attachment of an air discharge duct to direct the radiator air outside according to the manufacturer's instructions. The cooling system shall be filled with 50/50 ethylene glycol/water mixture by the equipment supplier. Rotating parts shall be guarded against accidental contact.
- I. Engine Accessory Equipment: The engine-generator set shall include the engine accessories as follows:
1. An electric starter(s) capable of three complete cranking cycles without overheating, before overcrank shutdown (75 seconds).
 2. Positive displacement, mechanical, full pressure, lubrication oil pump.
 3. Full flow lubrication oil filters with replaceable spin-on canister elements and dipstick oil level indicator.
 4. An engine driven, mechanical, positive displacement fuel pump.
 5. Fuel filter with replaceable spin-on canister element.
 6. Replaceable dry element air cleaner with restriction indicator.
 7. Flexible supply and return fuel lines.

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- J. Base: The engine-generator set shall be mounted on a heavy-duty steel base to maintain proper alignment between components. The engine-generator set shall incorporate a battery tray with hold down clamps within the base rails. Provisions for stub up of electrical and fuel connections shall be within the footprint of the generator set base rails.
- K. Generator Set Auxiliary Equipment:
1. Engine mounted, thermostatically controlled, water jacket heater(s) for the engine. The heater(s) shall be sized as recommended by the equipment supplier. Heater voltage shall be 120V, single phase.
 2. Generator main circuit breaker, set-mounted and wired, UL listed, rated 600A, 3P (100% Rated). Field circuit breakers shall not be acceptable for generator overcurrent protection. The circuit breaker shall include provisions for shunt trip. Provide auxiliary contact for trip status reporting (common w/engine shutdown). Tripping of the generator circuit breaker while under load shall initiate engine shutdown.
 3. Vibration isolators, spring isolators type, quantity as recommended by the generator set manufacturer.
 4. Battery Charger: A 10 amp voltage regulated battery charger shall be provided for the engine-generator set. Input AC voltage and DC output voltage shall be as required. Chargers shall be equipped with float, taper and equalize charge settings. Operational monitors shall provide visual output along with individual form C contacts rated at 4 amps, 120 VAC, 30 VDC for remote indication of:
 - a. Loss of AC power - red light
 - b. Low battery voltage - red light
 - c. High battery voltage - red light
 5. Starting and Control Batteries: Starting batteries, lead acid type, 12 volt DC, sized as recommended by the generator set manufacturer, shall be supplied for the generator set with battery cables and connectors.
- L. Sound Attenuated Weatherproof Enclosure: Provide a factory installed weatherproof enclosure (Level 1 sound attenuation) sized to house the engine-generator set, exhaust silencer, batteries and charger. The enclosure shall be constructed of aluminum, with stainless steel hardware. Enclosure shall be painted hunter green color. Enclosure doors shall be padlockable and conveniently placed for ease of operation and maintenance.
- M. Sub-base Fuel Tank: Provide an integrally mounted, dual wall steel, diesel fuel tank, 2,500 gallon capacity. The tank shall be U.L. listed with both inner and outer tank emergency vents per NFPA 30. The sub-base fuel tank shall be as manufactured by the Tramont Corporation, Milwaukee, Wisconsin, with the following system accessories:
1. Dual high/low fuel level switch (provide high level audible alarm on gen. control panel)
 2. Leak detection switch.

2.02 AUTOMATIC TRANSFER SWITCH

Generator Replacement Lift Station #55
CMA Project No. 22-0016.00006

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- A. Listed Equipment: The transfer switch shall be UL listed per UL Standard 1008, and CSA Approved. Main power switch contacts shall be rated as shown on the drawings.
- B. The withstand and closing rating shall be equal or greater than 25,000A, symmetrical. Withstand and closing ratings shall be verified by UL witnessed test and shall be the ratings listed by UL for the transfer switch equipment supplied.
- C. Construction: Transfer switches shall be double-throw construction, positively electrically and mechanically interlocked by a mechanical beam to prevent simultaneous closing (for break before make operation), and mechanically held in both normal and emergency positions. The construction features and accessories shall be as follows:
1. Transfer switches rated through 1000 amperes shall be equipped with permanently attached operating handles and quick-break, quick-make contact mechanisms suitable for manual operation under load.
 2. The main switch contacts on contractor type transfer switches shall be high-pressure silver alloy contacts to resist burning and pitting for long life operation. Contact assemblies shall have arc chutes of heat absorbing material and metal leaves for positive extinguishing of arcs. Arc chutes shall have insulating covers to prevent interphase flashover.
 3. Transfer switches shall have one Form C, 10 Amp 250 Volt AC auxiliary switch on both normal and emergency sides, operated by the transfer switch.
 4. Terminal lugs, UL listed and CSA approved as suitable for copper and aluminum conductors, shall be provided for normal, emergency, and load connections. Wire bend space shall comply with NEC Article 373.
 5. Transfer switch shall be mounted in a NEMA 4X, stainless steel enclosure. Where specified by NEMA Type, separate enclosures shall be UL listed. The cabinet shall provide NEC required wire bend space at point of entry as shown on the drawings. Manual operating handles and all control switches (other than key-operated switches) shall be accessible to authorized personnel only by opening the key-locking cabinet door. Transfer switches with manual operating handles and/or non key-operated control switches located on outside of cabinet do not meet this specification and are not acceptable.
- D. Automatic Controls: Control shall be solid-state and mounted inside of key-locking front door. Control disconnect plugs shall be provided to de-energize control circuits to avoid shock hazard while making control adjustments. The control shall be designed for a high level of immunity to power line surges and transients and tested to IEEE Standard 587-1980. The control shall have optically isolated logic inputs, high isolation transformers for AC inputs, and relays on all outputs. Other control features shall be as follows:
1. Solid-state undervoltage sensors shall simultaneously monitor all phases of the normal source and all phases of the emergency source. Voltage sensors shall allow for adjustment to sense partial loss of voltage on any phase of normal where motor feedback voltages exist. Pick-up setting shall be adjustable from minimum of 85% to maximum of 100% of nominal voltage. Dropout settings shall be adjustable from minimum of 75% to maximum of 98% of pick-up setting with fixed dropout time delay of 0.5 seconds. Voltage sensors shall have

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provision for field calibration where supply voltage is higher or lower than nominal system voltage.

2. Controls shall signal the engine-generator set to start upon signal from normal source voltage sensors. Solid-state time delay start, adjustable from 0 to 120 seconds (factory set at 20 seconds) shall avoid nuisance start-ups on momentary voltage dips for momentary interruptions. Start contacts for the engine control shall be gold type, dry contacts wired to a terminal block and compatible with the generator set control equipment furnished.
3. The switch shall transfer the load to the emergency power system after the generator set reaches proper voltage and frequency. Solid-state time delay transfer, adjustable from 0 to 120 seconds (factory set at 2 seconds) shall allow the engine-generator set to stabilize before application of load.
4. The switch shall retransfer the load to the normal source after normal power restoration. Solid-state time delay retransfer, adjustable from 0 to 30 minutes (factory set at 5 minutes), shall allow normal power to stabilize before retransfer.
5. An in-phase monitor shall control the retransfer to the normal source.
6. Controls shall signal the engine-generator set to stop after load retransfer to normal source. Solid-state time delay stop, adjustable from 0 to 15 minutes (factory set at 5 minutes) shall maintain availability of emergency source in event that normal source fails shortly after retransfer and shall permit engine to run unloaded for cool down before shut down.
7. The operating power for transfer and retransfer shall be obtained from the source to which the load is being transferred. Controls shall provide an automatic retransfer of the load from emergency source to normal source if emergency source fails when normal source is available.
8. Controls shall provide built-in "control mode status indicators", consisting of light emitting diodes to indicate a sequence of functions such as the following:
 - a. Source 1 OK
 - b. Start Gen Set
 - c. Source 2 OK
 - d. Transfer Timing
 - e. Transfer Complete
 - f. Retransfer Timing
 - g. Retransfer Complete
 - h. Timing for Stop

These indicators shall allow the operator to determine that the controls are properly sequencing and shall assist in determining sequence of any malfunctions that might occur.

9. The control shall include provisions for remote transfer inhibit and area protection. Opening the transfer inhibit terminals shall prevent the transfer switch from operating from the normal source to the emergency source, even if the emergency source is good and the normal source is not. Closing the area protection/remote test terminals shall cause the control to sense a normal power

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failure, start the generator set, and transfer to the emergency source.

10. Provide a solid-state exerciser clock to set the day, time, and duration of generator set exercise/test period. A 100 hour battery backup power supply shall be provided to maintain clock settings during loss of normal power. Provide a with/without load selector switch for the exercise function.
- E. Transfer Switch Devices: Provide devices mounted on an interior deadfront door consisting of:
1. Transfer switch position indicator lamps; Normal (green), Neutral (amber), and Emergency (red). Provide normal source available (green) and emergency source available (green) indicator lamps.
 2. A four-position keyed selector switch to provide the following positions and functions:
 - a. Load Test - Simulated normal power loss to control unit for testing of generator set, including transfer of load. Controls shall include provisions to automatically return the system to the normal power source if the generator set fails during any test or exercise period.
 - b. No-Load Test - A system test without load transfer.
 - c. Automatic - Normal operating position; restores the load to the normal source after test and after time delays.
 - d. Stop - Engine stop.
- F. Manufacturer: Transfer switches shall be ASCO, Onan, or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation shall comply with applicable state and local codes as required by the authority having jurisdiction. Install equipment in accordance with manufacturer's instructions and instructions included in the listing or labeling of UL listed products.
- B. Provide branch circuits as required, from the panelboard for the generator set auxiliaries.
- C. Provide and install all necessary control wiring between system components whether or not shown on the drawings.

3.02 TESTING

- A. To provide proven reliability of the system, three series of tests shall be performed: Prototype Model Tests, Production Model Tests, and Field Tests. The manufacturer shall provide documentation demonstrating satisfactory prototype and production test results. Generator sets that have not been prototype tested and factory tested at 0.8 PF will not be acceptable.
- B. Generator Set Factory Prototype Tests and Evaluation: These tests and evaluations must have been performed on a prototype generator set representative of the Model specified. A summary of the generator set testing results shall be submitted for review. The manufacturer's standard series of component development tests on the generator system, engine, and other major

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components shall also be performed and available for review, but shall not be acceptable as a substitute for prototype testing on the complete representative generator set prototype.

1. Torsiograph Analysis and Test: The manufacturer of the generator set shall verify that the engine-generator set, as configured, is free from harmful torsional stresses. The analysis shall include correlation of empirical data from tests on a representative prototype. The empirical data must include spectrum analysis of the torsional transducer output within the operating speed range of the engine-generator set. Calculations based on engine and generator separately are not acceptable.
2. Temperature Rise Test: Complete thermal evaluation of a prototype generator rotor and stator must include actual measurement of internal generator and exciter temperatures by embedded detector method, and measurement of average temperature rise by resistance method. No position measured any place in the windings may exceed the temperature rise limits of NEMA for the particular type of insulation system used. Resistance method temperature rise data shall be confirmed by a full load test on the generator set prototype to include conducted and radiated heat from the engine.
3. Short Circuit Test: A test on a prototype generator set shall have demonstrated that the generator set is designed to withstand the mechanical forces associated with a short circuit condition. With the generator set operating at rated load and speed, the generator terminals must be short circuited on all three phases for a duration of 20 seconds. At the conclusion of this test, the generator set must be capable of full load operation.
4. Endurance Run Test: A minimum of five hundred (500) continuous hours of endurance testing with a representative generator set prototype operating as defined by the manufacturer's standby rating shall have been performed. Endurance testing shall be used to verify structural soundness and durability.
5. Maximum Power Test: With the prototype generator set at normal operating temperature and with all power consuming auxiliaries in place, the maximum power available at rated speed shall be determined with the governor set at its fuel stop. The generator set shall maintain this power for a minimum of two minutes.
6. Linear Vibration Test: A test for in-line motion of components occurring along a repeatable path shall meet the manufacturer's acceptance criteria.
7. Cooling System Test: A cooling system test shall demonstrate the ability of the generator set cooling system to maintain normal operating temperature while operating at full rated load and power factor at the highest ambient temperature of the system rating. Cooling air requirements, radiator airflow and maximum allowable restriction at radiator discharge, shall be verified by this test.
8. Maximum Motor Starting kVA: Motor starting kVA shall be determined by test, based on a sustained RMS recovery voltage of at least 90% of no load voltage with the specified load kVA at near zero power factor applied to the generator set.

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9. Transient Response, Steady-state Speed Control, and Voltage Regulation: Prototype generator set tests shall demonstrate consistent performance as follows; stable voltage and frequency at all loads from no load to full rated load, consistent frequency bandwidth with steady- state load, maximum voltage and frequency dip on load acceptance and rejection, and restoration to steady state after sudden load changes. Transient response is a complete generator set (engine, generator, exciter, and regulator) performance criteria and cannot be established based on generator data alone.
- C. Transfer Equipment Prototype Tests: Prototype samples, representative of the production transfer switches supplied, shall have been tested as defined in UL 1008, including but not limited to:
1. Overload tests for the capability to make and break six (6) times the transfer switch rated current at low power factor without any electrical or mechanical malfunction.
 2. Temperature rise test at 100% of rated current without exceeding temperature rise limits. Transfer switches incorporating integral overcurrent devices in the main power circuit and tested at 80% of rating shall not be permitted.
 3. Endurance tests for a minimum of 3,000 mechanical operation cycles.
 4. A dielectric voltage withstand test of 1000 volts plus twice rated for one minute.
 5. Withstand and Closing tests with specific overcurrent devices. All withstand and closing tests shall be performed with the overcurrent protective devices located external to the transfer switch. Tests conducted with overcurrent protective devices internal to the switch, in such a manner that the transfer switch interrupts the current rather than withstanding the current, are not acceptable under this definition of withstand.
 6. The entire transfer switch shall be performance tested per the requirements of IEEE-587-1980, for voltage surge withstand capability.

3.03 FACTORY TESTS

- A. Generator set factory production tests: on the equipment to be shipped, shall be performed at rated load and 0.8 PF. These tests shall include run at full load, maximum power, voltage regulation, transient and steady-state governing, single step load pickup, and safety shutdowns. Provide a factory certified test record of the production testing.
- B. Transfer equipment production model tests: Each production model transfer switch supplied shall be factory tested before shipment. Factory tests shall include a complete functional test of the transfer switch control, including calibration of the voltage sensor potentiometers.

3.04 ON-SITE ACCEPTANCE TEST

- A. The complete installation shall be tested for compliance with the specification following completion of all site work. Testing shall be conducted by representatives of the manufacturer, with required fuel supplied by Contractor. The Engineer shall be notified in advance and shall have the option to witness the tests. Installation acceptance tests to be conducted on-site shall include a "cold start" test, a two hour full load test, and a one-step rated load pickup test in

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accordance with NFPA 110.

- B. Provide a resistive load bank and make temporary connections for full load test. Load bank shall be capable of definite and precise incremental loading and shall not be dependent on generator control instrumentation to read amperage and voltage of each phase. Salt water brine tanks or those load banks requiring water as a source for cooling are not acceptable for this purpose and are disallowed and shall not be utilized for this test.

3.05 SCHEDULED OIL SAMPLING

- A. In order to forecast and minimize engine failure, the supplier of the equipment must provide a yearly (every twelve (12) months) oil sampling analysis throughout the warranty period. This scheduled oil sampling shall not be of the atomic absorption spectrophotometry method as opposed to the spectrographic analysis method and shall be accurate to within a fraction of one (1) part per million for the following elements:

- 1. Iron
- 2. Copper
- 3. Chromium
- 4. Aluminum
- 5. Silicon

In addition, the sample shall be tested for the presence of water, fuel dilution, and anti-freeze.

- B. All equipment needed to take oil samples shall be provided in a kit at the time of acceptance and shall include the following:
 - 1. Sample gun kit (1)
 - 2. Bottles (8)
 - 3. Mailers (8)
 - 4. Written instructions (1)
- C. Immediate notification shall be provided to the OWNER when analysis results show any critical reading. If readings are normal, a report showing that the equipment is operating within established requirements shall be provided.

3.06 TRAINING

- A. The equipment supplier shall provide training for the facility operating personnel covering operation and maintenance of the equipment provided. The training program shall be not less than 4 hours in duration and the class size shall be limited to 5 persons. Training date shall be coordinated with the facility owner.

END OF SECTION