

**Contract Bidding Documents**

**Service Area 3  
Watermain Rehabilitation Phase 2**



**City of Wauchula  
126 South 7<sup>th</sup> Avenue  
Wauchula, Florida 33873**

**Project No. 046292031**

**Mandatory Pre-Bid Meeting:**

**Date: August 29<sup>th</sup>, 2023**

**Time: 10:00am**

**Location: City of Wauchula Administration Building  
126 South 7<sup>th</sup> Avenue  
Wauchula, Florida 33873**

**Sealed Bids Due:**

**Date: September 15<sup>th</sup>, 2023**

**Time: 2:00pm**

**Location: City of Wauchula Administration Building  
126 South 7<sup>th</sup> Avenue  
Wauchula, Florida 33873**

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DIVISION 1:  
INSTRUCTIONS TO BIDDERS

## INVITATION FOR BID

Sealed Bids will be received by the City of Wauchula located at 126 South 7<sup>th</sup> Avenue, Wauchula, Florida 33873, until 2:00 PM local time on September 15, 2023. Bids received after said time will be returned unopened. The Bidder shall be solely responsible for delivery of their Bid. Reliance upon mail or public carriers is at the Bidder's risk.

The principal features of the Work are:

1. Replacement of watermains, services, meters, and fire hydrants along Louisiana Street, Oak Street, Florida Avenue, 10th Avenue, 9th Avenue, 8th Avenue, and 7th Avenue as shown in the contract documents.

The Contract(s) awarded under this Solicitation will be funded, in part, by grants from the State of Florida and the Hardee County Economic Development Authority. Neither the State, Hardee County, nor any of their departments, agencies, or employees are or will be a party to this Solicitation or any resulting contract.

Plans and specifications are on file for inspection at the City of Wauchula Administration Building located at 126 South 7<sup>th</sup> Avenue, Wauchula, Florida 33873.

The Bidder is solely responsible for obtaining the Bid Documents. An electronic version of the Bid Documents may be downloaded from the City of Wauchula website at the following <https://www.cityofwauchula.gov>.

Sealed Bids shall reference the following on the outer envelope:

SEALED BID: BIDDER'S NAME AND ADDRESS  
CITY OF WAUCHULA – SERVICE AREA 3 WATERMAIN REHABILITATION PHASE 2 –  
Project No. 046292031

All Bids shall be publicly opened, read aloud and recorded at 2:00 PM local time on September 15, 2023 in the City of Wauchula Administration Building, 126 South 7<sup>th</sup> Avenue, Wauchula, Florida 33873.

**Mandatory Pre-Bid Meeting:** All interested Bidders must attend the entire meeting. Bidders not attending the Pre-Bid Meeting will have their Bids returned unopened. The Pre-Bid meeting will be held at 10:00 AM local time on August 29, 2023 in the City of Wauchula Administration Building, 126 South 7<sup>th</sup> Avenue, Wauchula, Florida 33873.

**Questions:** All questions regarding this Invitation for Bid shall be submitted in writing and delivered to Stephanie Camacho, City Clerk, City of Wauchula, 126 South 7<sup>th</sup> Avenue, Wauchula, FL 33873, or via email: [scamacho@cityofwauchula.com](mailto:scamacho@cityofwauchula.com) by 5:00pm on September 5, 2023.

Pursuant to section 287.05701, Florida Statutes, the City is prohibited from requesting documentation of, considering, or giving preference to a vendor based on the vendor's social, political, or ideological interests when determining if the vendor is a responsible vendor.

## SECTION 1.1: GENERAL INSTRUCTIONS TO BIDDERS

### 1.1.1 Defined Terms in the Instructions to Bidders

- A. The words and terms defined in DIVISION 3: TERMS AND CONDITIONS are hereby incorporated by reference into this part.

### 1.1.2 Minimum Qualifications for Eligibility to Bid

- A. Receipt of this Solicitation and other Bid and Contract related documents from the Owner or its designated representatives does not constitute the Owner's approval of the Bidder's qualifications.
- B. Bidders shall have the following minimum qualifications to be considered eligible to bid in response to this Solicitation. It is the responsibility of the Bidder to ensure and certify that it meets the minimum qualifications. Bidders not meeting all of the following criteria will not have their Bids considered for Award.
  - 1. Bidder shall be a licensed contractor in the State of Florida, in accordance with Chapter 489, *Florida Statutes*.
  - 2. Bidder shall have been in the business of performing projects of the same scope for at least the past five (5) years.
  - 3. Bidder shall demonstrate that it has successfully completed at least three (3) projects of similar scope and scale to the Work described herein, for at least two (2) different Florida government agencies within the past five (5) years. Bidder shall submit names and contact information for each referenced project. Factors the Owner may consider to make a determination of the Bidder's eligibility under this criterion include but are not limited to:
    - a. The Bidder's ability to perform work in a satisfactory manner as evidenced by the Bidder's past performance on other projects performed for the Owner, and
    - b. The Bidder's past performance of satisfactory work as evidenced by project descriptions submitted for three stated projects as part of the Bid and the Owner's verification of associated references; and
    - c. The Bidder's past performance as evidenced by any other information the Owner gathers or obtains during the Bid review process, including but not limited to information included on the Bidder's Qualifications questionnaire.
- C. The Bidder certifies, under penalty of perjury, that it holds all licenses, permits, certifications, insurances, bonds and other credentials required by law, Contract or practice to perform the Work. The Bidder also certifies that, upon the prospect of any

change in the status of applicable licenses, permits, certifications, insurances, bonds or other credentials, the Bidder shall immediately notify the Owner of the change.

1.1.3 Bid Security

- A. Each Bid is to be accompanied by a Bid Security made payable to the Owner in an amount at least equal to five (5) percent of the Bidder's maximum Bid Price and in the form of a Certified Check or Bid Bond. Failure to furnish the required Bid Security will disqualify the Bid.

1.1.4 Minority and Women's Business Enterprise Goals, Equal Opportunity and Non-Discrimination

- A. The City hereby notifies all Proposers that Women/Minority Owned Business Enterprise are to be afforded a full opportunity to participate in any request for proposal by the City and will not be subject to discrimination on the basis of race, color, sex, gender, religion, or national origin.

B. The City is an equal opportunity/affirmative action employer. The City is committed to equal opportunity employment and expects firms that do business with the City to have a vigorous affirmative action program. Any proposer who enters a contract with the City must covenant and agree that no employee or applicant for employment with the proposer's company will be discriminated against during the course of employment or in the application process with respect to hiring, tenure, terms, conditions, or privileges of employment, because of race, color, religion, sex, gender, age, disability, national origin, marital status, political affiliation, familial status, pregnancy, gender or sexual orientation, or veteran or service member status.

Any proposer who enters into a Contract with the City must also acknowledge its continuous duty to disclose to the City if it or any of its affiliates, as defined by Section 287.134(1)(a), Florida Statutes, has been placed on the Discriminatory Vendor List. Pursuant to Section 287.134(2)(a), Florida Statutes: "An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity."

1.1.5 Notice of Liquidated Damages

- A. In the event a Contract is awarded as a result of this Solicitation, the Contract will be subject to liquidated damages as set forth in DIVISION 3: TERMS AND CONDITIONS.

1.1.6 Florida Trench Safety Act

- A. The Bidder shall complete and submit with its Bid the Florida Trench Safety Act Acknowledgment form, in accordance with Section 553.60, *Florida Statutes, et. seq.*, when the Work includes trench excavations that exceed five (5) feet in depth and as written assurance that the Bidder shall comply with all applicable trench safety standards, laws, rules and regulations during performance of any Work awarded from this Solicitation.

#### 1.1.7 Subcontractors

- A. The Bidder shall supply with their Bid a list of all Subcontractors and Suppliers that it intends to use for the Work. The Successful Bidder shall not be permitted to use Subcontractors and Suppliers other than those shown in the Bid unless good cause is shown and prior written consent is obtained from the Owner.
- B. If the Bidder plans to use a single Subcontractor or Supplier to perform over 50% of the Work, the Bidder shall obtain the Owner's approval prior to the opening of Bids. Failure to obtain the Owner's approval will disqualify the Bid.
- C. Bidder's choice of subcontractors or subconsultants must be approved by the Owner. While the Owner shall have the right to approve or reject each subcontractor or subconsultant, such approval shall not be unreasonably withheld.
- D. The Bidder may not use as a Subcontractor or Supplier, any Bidders that were rejected in the Bid process due to incomplete status or unqualified Bids.

#### 1.1.8 Payment and Performance Bonds

- A. As stated in DIVISION 3: TERMS AND CONDITIONS of the Contract Documents, the successful Bidder shall be required to furnish a Payment Bond and a Performance Bond in accordance with Section 255.05, *Florida Statutes* prior to the start of any Field Work.

#### 1.1.9 Estimated Quantities Provided for Bidding Reference

- A. The Bidder understands and agrees that the Owner's estimated Contract amounts shall not obligate the Owner in any way to issue Purchase Orders under the Contract of this amount, or any amount of Work under the Contract. The Owner may, at its sole discretion, issue Purchase Orders under the Contract totaling more or less than the estimated amounts, or may award the Contract, and is under no obligation to issue any Purchase Orders under the Contract. In the event that quantities change after Award, the changes to price and/or scope shall be made in accordance with the terms and conditions stated in the Contract Documents.
- B. Any item not shown on the Bid Form, but that is shown in the Drawings or Technical Specifications section, that is required to perform the Work, or that is required as part of a complete and operable system, shall be included in the Bid Price.

#### 1.1.10 Existing Site Conditions & Technical Data

- A. Where the Bidder visits sites, no Work or other disturbance is to be performed while at the site without written permission by the Owner in advance of the site visit. The Bidder shall comply with all safety requirements described in the Bid Documents and the Owner may require the Bidder to show proof of a minimum of \$1 million of general liability insurance.
- B. No reports of Hazardous Materials at the Site are known to the Owner or the Engineer, unless disclosed in the specifications.
- C. In the preparation of Drawings and Technical Specifications, the Engineer relied upon the following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the Site:
  - 1. Topographical Survey provided by Pickett Surveying and Photography, Dated 10/09/2014.
  - 2. Main Street Drainage Plans by Chastain Skillman, Dated 09/23/2014
  - 3. City of Wauchula Water And Sewer As-builts, Dated 1925
- D. Copies of the reports (and drawings) itemized above that are not included with the Bid Documents may be examined at Kimley-Horn and Associates, Inc. located at 109 South Kentucky Avenue, Lakeland, FL 33801 during regular business hours. These reports (and drawings) are not part of the Contract Documents but comprise additional "technical data" upon which the Bidder may rely as identified and established.
- E. The Bidder is solely responsible for obtaining and verifying all technical data necessary to submit its Bid.

#### 1.1.11 Pre-Bid Clarifications & Addenda

- A. All questions regarding the Bid Documents must be submitted to the Procurement Representative identified in the Solicitation no later than ten (10) business days prior to the Bid Opening date. The Bidder shall promptly give the Owner written notice of any errors, conflicts or ambiguities it discovers in the Bid Documents.
- B. If the Bidder objects in any manner to the Terms and Conditions or Technical Specifications, the objection must be addressed in writing no later than ten (10) business days prior to the Bid Opening Date. The Owner will address the objection in an Addendum if the Owner believes that a clarification or change is necessary.
- C. The Owner may issue Addenda prior to the opening of Bids to change or clarify the intent of the Bid Documents. The Owner will issue written responses to questions and requests for clarifications received by the stated deadline in the form of Addenda and will distribute Addenda to all Bidders who have attended the Pre-Bid Meeting and provided acceptable contact information.

- D. The Bidder shall be responsible for ensuring it has received all Addenda prior to submitting its Bid and shall acknowledge receipt of all Addenda by completing the Bidder's Representation section on the Bid Form in DIVISION 5: FORMS. All Addenda will become part of the Bid Documents and any resulting Contract Documents. Failure to acknowledge receipt of Addenda may be grounds for rejection of a Bid at the Owner's sole discretion.

#### 1.1.12 Completing the Bid Form

- A. Bidders shall complete and submit the enclosed Bid Form with responses typewritten or written in ink. When a blank is marked "optional", the Bidder shall insert the words "No Bid" in the space provided if the Bidder does not choose to submit a price for that item.
- B. Failure to complete each blank with either a price or the words "No Bid" may disqualify the Bid. Failure to submit a Bid that addresses all parts of the Work may disqualify the Bid.
- C. The Bidder, or its authorized agent or officer of the firm, shall sign the Bid Form. Failure to sign the Bid Form may disqualify the Bid.
- D. Owner-approved erasures, interlineations or other corrections shall be authenticated by affixing in the margin, immediately opposite the correction, the handwritten signature of each person executing the Bid. Failure to authenticate changes may disqualify the Bid.
- E. The Owner will review the Bids to determine that they meet the specifications set for the Work in the Bid Documents. The Owner may disqualify any Bids that deviate from the requirements of this Solicitation, and those that include unapproved exceptions, amendments, or erasures.
- F. Failure to complete and submit all additional forms and documentation required in the Bid Documents to accompany the Bid Form may disqualify the Bid.

#### 1.1.13 Modification or Withdrawal of Bids

- A. The Bidder may modify or withdraw its Bid at any time prior to the advertised Bid Opening by giving written notice to the City of Wauchula, 126 South 7<sup>th</sup> Avenue, Wauchula, Florida 33873. The Owner shall not accept any modifications to Bids after the advertised Bid Opening. The Bidder shall not withdraw its Bid for a period of 120 calendar days following the advertised Bid Opening.

#### 1.1.14 Submitting the Bid Documents

- A. The Bidder shall submit its Sealed Bid in response to this Solicitation no later than the Bid Due Date and Time stated in the Invitation for Bid, or as may be subsequently amended via Addenda. The Bid shall be sealed and the envelope clearly marked with the title stated

in the Invitation for Bid and the Bidder's name and address. The Sealed Bid may be enclosed in another mail or courier service package.

- B. The Bidder shall submit one (1) original Bid and two (2) duplicates of the original Bid.
- C. All Bids must be received at the location and by the date and time stated in the Invitation for Bid, or as may be subsequently amended via Addenda. The Bids from all Bidders will be publicly read at the date and time advertised for the Bid Opening. Bids arriving after the advertised Bid Opening date and time and/or at an incorrect location will be returned to the Bidder unopened. Reliance upon third-party courier or delivery service is at the Bidder's risk.
- D. All information marked by the Owner or the Bidder as "Confidential Information" that is included in the Solicitation or that is submitted by the Bidder as part of its Bid shall be handled in accordance with the terms and conditions stated in DIVISION 3: TERMS AND CONDITIONS.

#### 1.1.15 Opening of Bids

- A. The Owner will open Bids at the date, time and location stated in the Invitation for Bid, or as may be subsequently amended via Addenda. At the Bid Opening, the Owner will publicly open and read each Bid that was received prior to the advertised deadline for bid submissions, except those that have been properly withdrawn.
- B. The Owner has the right to waive any irregularities or informalities in the Bids.
- C. Copies of all Bids will be available for public inspection ten (10) business days after the Bid Opening date. Bidders may review opened Bids by contacting the designated Owner Representative to arrange a mutually convenient time for such review at the Owner's offices.

#### 1.1.16 Calculation of Bid Price

- A. The Owner will use the Bidder's base bid when making price comparisons for Award purposes.
- B. The Owner will consider alternate Bids only if the Bidder submits a base Bid in accordance with the Bid Documents. The Owner will review alternates on the Bid Form, and will reject or accept at the Owner's sole discretion.

#### 1.1.17 Award

- A. The Owner will Award the Contract to the lowest, responsive and responsible Bidder whose Bid meets or exceeds specifications, in accordance with the Contract Documents. The Owner reserves the right to reject any/all Bids, in whole or in part, as deemed to be in the Owner's best interest.



1.1.18 Notice of Award

- A. The Owner intends to Award one Contract for as many items as possible to achieve maximum benefit from this Contract. The Owner may Award more than one Contract, based on certain groupings of items, which the Owner may revise or reorganize, or the Owner may exclude line items if in its best interest. In the event the Owner makes an award as a result of this Solicitation, the Owner will issue a Notice of Award, in writing and signed by an authorized Owner's Representative as notice to the Bidder that the Owner has deemed it the successful Bidder.
- B. The Notice of Award will be accompanied by relevant Contract Documents for execution. Unless expressly waived by the Owner, the Successful Bidder shall execute a Contract for the Work in a form acceptable to the Owner within the timeframe stated on the Notice of Award. If the Bidder fails to execute the Contract Agreement form or associated documents, or to obtain the necessary bonds, licenses or insurances as required, or if it fails to act on an Owner-issued Purchase Order ("PO"), the Owner may cancel the Award with no further liability to the Bidder, retain the Bid Security, and Award to the next lowest responsive and responsible Bidder.
- C. Upon receipt of the completed documents, the Owner will execute the Contract Documents and issue the Contractor one fully executed original copy. No other Owner action shall constitute acceptance of the Bid.

1.1.19 Notice to Proceed

- A. Upon receipt of the executed Contract, the required Payment Bond, Performance Bond, and compliant Certificate of Insurance, the Owner will issue a Notice to Proceed in writing and signed by an authorized Owner's Representative as authorization for the Contractor to proceed with the Work, unless otherwise stated in the Contract.
- B. In the event that the Owner intends to authorize the Successful Bidder to proceed with Administrative Work only, or with only a portion of the Work, then the Owner shall state the specific limitations of such authorization in a written notice, and the Owner will issue a separate Notice to Proceed to authorize the Contractor to begin Field Work, when applicable, or to perform the remainder of the Work, or any portion thereof. The Contractor shall ensure that it is prepared to begin Field Work upon receipt of the Notice to Proceed. Any Work performed outside of this partial authorization shall be at the Contractor's risk and the Owner shall have no obligation to pay for such Work.

1.1.20 Certification and Representations of the Bidder

- A. By signing and submitting a Bid, the Bidder certifies and represents as follows:
  - 1. That it has carefully examined all available records and conditions, including sites if applicable, and the requirements and specifications of these Bid Documents, including but not limited to all sample Contract Documents, Technical Specifications, Drawings, exhibits and attachments thereto, prior to submitting its Bid.

2. That every aspect of its submitted Bid, including the Bid Price and the detailed schedule for the execution of the Work, are based on its own knowledge and judgment of the conditions and hazards involved, and not upon any representation of the Owner. The Owner assumes no responsibility for any understanding or representation made by any of the Bidder's representatives during or prior to execution of the Contract unless such understandings or representations are expressly stated in the Contract and the Contract expressly provides that the Owner assumes the responsibility.
3. That the individual signing the bid is a duly authorized agent or officer of the submitting firm. Bids submitted by a corporation must be executed in the corporate name by the President or a Vice President. If an individual other than the President or a Vice President signs the bid, satisfactory evidence of authority to sign must be submitted with the bid. If the bid is submitted by a partnership, the bid must be signed by a partner whose title must appear under the signature. If an individual other than a partner signs the bid, satisfactory evidence of authority to sign must be submitted with the bid. The corporation or partnership must be in active status at the Florida Division of Corporations at the time of submission of the Bid.
4. That the submitting Bidder maintains in active status any and all licenses, permits, certifications, insurance, bonds and other credentials including not limited to contractor's license and business registration tax necessary to perform the Work. The Bidder also certifies that, upon the prospect of any change in the status of applicable licenses, permits, certifications, insurances, bonds or other credentials, the Bidder shall immediately notify the Owner of any change.
5. That it has read, understands and will comply with the Article 1.1.22 of this section entitled "Ethics."

1.1.21 Conflict of Interest

- A. Any Bidder bidding the construction phase of a project cannot at the time of Bid submittal, be affiliated with or have any direct or indirect ownership interest in the architect/engineer ("Designer") of record. The Bidder will also be prohibited from bidding if the Designer has any direct or indirect ownership interest in the Bidder. Should the Owner erroneously award a contract in violation of this policy, the Owner may terminate the contract at any time with no liability to Contractor, and Contractor shall be liable to the Owner for all damages, including but not limited to the costs to rebid the Project. The purpose of this policy is to encourage open, fair and competitive bidding and to eliminate any actual or perceived advantage that one bidder may have over another. In addition to this policy, Design Build projects are governed by the provisions of Section 287.055(9)(b), *Florida Statutes*.

1.1.22 Ethics

- A. By signing the Bid Form, the Bidder certifies this Bid is made without any previous understanding, agreement or connection with any other person, firm, or corporation submitting a Bid for the same Work other than as a Subcontractor or supplier, and that this Bid is made without outside control, collusion, fraud, or other illegal or unethical actions. The Bidder shall comply with all Owner ordinances, policies and procedures regarding business ethics.
- B. The Bidder shall submit only one Bid in response to this Solicitation. If the Owner has reasonable cause to believe the Bidder has submitted more than one Bid for the same Work, other than as a Subcontractor or Supplier, the Owner may disqualify the Bid and may pursue debarment actions.
- C. This solicitation is subject to Chapter 112, Florida Statutes, and the Bidder shall disclose the name of any officer, director, employee, or other agent who is also an employee of the Owner or the City of Wauchula. The Bidder shall also disclose the name(s) of any public officials or employees who have any financial position, directly or indirectly, with this Bid by submitting such information with its Bid. Failure to do so will disqualify the Bid. If the Owner has reason to believe that collusion exists among the Bidders, the Owner will reject any and all Bids from the suspected Bidders and may proceed to debar the Bidder(s) from future Work.
- D. Pursuant to Section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid or proposal on a contract to provide any goods or services to a public entity, may not submit a bid or proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list. In accordance with Section 287.133, *Florida Statutes*, the Owner will reject Bids from any persons or affiliates convicted of a public entity crime as listed on the Convicted Vendors list maintained by the Florida Department of Management Services. The Owner shall not make an Award to any officer, director, executive, partner, shareholder, employee, member, or agent active in management of the Bidder listed on the Convicted Vendor list for any transaction exceeding \$10,000 for a period of thirty-six (36) months from the date of being placed on the Convicted Vendor list. By submitting a bid, the Bidder hereby certifies that they have complied with this statute.
- E. If the Bidder violates any requirement of this Section, the Bid may be rejected and the Owner may debar the offending companies and persons from future Work with the Owner.

1.1.23 Ex Parte Communication

- A. Ex Parte Communication is strictly prohibited. Failure to adhere to this policy will disqualify the noncompliant Bidder's Bid. The Owner's policy on Ex Parte Communication will not prohibit the following:

1. Meetings called or requested by the Owner and attended by the Bidders for the purpose of discussing this Solicitation, evaluation, or selection process including, but not limited to, substantive aspects of the Solicitation. Such meetings may include, but are not limited to, Pre-Bid meetings, site visits to the Owner's or the Bidders' facilities, interviews/negotiation sessions as part of the selection process, and other presentations by the Bidders, all of which are requested by the Owner and will be limited to topics specified by the Owner.
2. The addressing of the Owner at public meetings advertised and conducted pursuant to Section 286.011, *Florida Statutes*.
3. The filing of a written protest to any proposed Award to be made pursuant to this Solicitation, evaluation and selection process, which filing and prosecution shall give notice to all Bidders. Protest proceedings shall be limited to open public meetings advertised and conducted pursuant to Section 286.011, *Florida Statutes* with no Ex Parte Communication outside those meetings.
4. Communications between the Owner representatives and the Bidder for routine matters arising from procurements other than this Solicitation.
5. Written communication between potential Bidders and the Engineer provided copies of written communications are provided to all Bidders.

#### 1.1.24 Prohibition Against Contingent Fees

- A. The Bidder warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Bidder, to solicit or secure a contract with the Owner, and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Bidder, any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the Award or making of the Contract. For the breach or violation of these provisions, the Owner shall have the right to disqualify the Bid and pursue debarment or terminate the Contract without liability and at its discretion, to deduct from the Contract Price, or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration.

#### 1.1.25 Protest of Bid and Award Process

- A. Bidders shall file any protests regarding this Solicitation in writing, and shall submit such to the Owner's Procurement Representative noted on the Solicitation no later than three (3) business days following the event giving rise to the protest. Failure to submit a written protest within the timeframe herein will constitute a waiver of the right to pursue a protest.
- B. The written protest shall include at minimum the following information:

1. Project or bid number of the solicitation protested;
  2. Title of solicitation protested;
  3. Specific identification of issue(s) protested; and
  4. Requested action for correction.
- C. The Owner's Procurement Representative will review the submitted information to ensure completeness and submit the issue to a committee comprised of the Owner's designated Project Manager for the Work, the City Manager and the Owner's Legal Counsel ("Protest Committee").
- D. The Protest Committee will review the protest and may request a presentation by the Bidder of the protested issue. The Protest Committee will issue a written decision within fourteen (14) calendar days of receipt of the written protest.

#### 1.1.26 Owner's Reservations

- A. The Bid Documents provide potential Bidders with information to enable the submission of written offers. The receipt of Bid Documents is not a contractual offer or commitment by the Owner to purchase products or services.
- B. Bids and Bid Prices shall be warranted for a period of one-hundred twenty (120) days following the opening of Bids, and no Bid may be withdrawn during such time period.
- C. The Owner reserves the right to reject any or all Bids, or any part thereof, and/or to waive irregularities or informalities if such action is in its best interest. The Owner may reject any Bids that it deems incomplete, obscure or irregular including, but not limited to, Bids that omit a price on any one or more items for which prices are required, Bids that omit Unit Prices if Unit Prices are required, Bids for which the Owner determines that the Bid is unbalanced, Bids that offer Equal Items when the option to do so has not been stated, Bids that fail to include a bid bond, where one is required, and Bids from Bidders who have previously failed to satisfactorily complete Contracts of any nature for the Owner.
- D. The Owner reserves the right to cancel, postpone, modify, reissue and amend this Solicitation at its discretion. The Owner reserves the right to cancel or change the date and time of the bid opening at any time prior to the advertised time.
- E. The Owner may Award the Contract in whole or in part. In such cases whenever the Owner exercises any of these reservations, the Owner will make a reasonable effort to notify, in writing, all parties to whom Bid Documents were issued. The Owner may award multiple or split Contracts if it is deemed to be in the Owner's best interest.

#### 1.1.27 Documents and Forms Included in the Bid Documents

- A. The reference to and/or inclusion of the Contract Documents and other Contract related forms in the Bid Documents shall in no way be construed as an Award of the Work, or any portion thereof, or as an intention to award the Work. The Owner reserves the right to alter, amend or delete any portion of these forms, to exclude any form, or to require additional forms not listed herein prior to execution of the Contract Documents.

#### 1.1.28 E-VERIFY REQUIREMENTS

Effective January 1, 2021, public and private employers, contractors, and subcontractors must require registration with, and use of the E-Verify system in order to verify the work authorization status of all newly hired employees. All Bidder are hereby notified that the City requires all vendors, contractors, and subcontractors to register with and use the E-Verify system as more fully set forth in the included Agreement.

### SECTION 1.2: REQUIRED FORMS TO SUBMIT WITH BID

#### 1.2.1 Bid Forms

- A. To submit a Bid in response to this Solicitation, all of the following forms must be completed and submitted as part of the Bid. Copies of the forms are contained in the Bid Documents. Additional copies may be requested by contacting the Owner.
  - 1. Bid Form (form included in DIVISION 5: FORMS)
  - 2. Bid Security (form included in DIVISION 5: FORMS)
  - 3. Bidder's Qualifications and supporting information (form included in DIVISION 5: FORMS)
  - 4. Bidder's Statement of Disputes, Litigation, Arbitration, and Surety Completion, Last Three (3) Years (form included in DIVISION 5: FORMS)
  - 5. Drug-Free Workplace Certificate (form included in DIVISION 5: FORMS)
  - 6. Florida Trench Safety Act Acknowledgement (form included in DIVISION 5: FORMS)
  - 7. Non-Collusion Affidavit (form included in DIVISION 5: FORMS)
  - 8. Public Entity Crimes Statement (form included in DIVISION 5: FORMS)
  - 9. Tabulation of Subcontractors and Suppliers (form included in DIVISION 5: FORMS)
  - 10. Evidence of authority to do business in the State of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

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

[END OF SECTION]

DIVISION 2:  
AGREEMENT



This Agreement is made and entered into on \_\_\_\_\_ (“Effective Date”), by and between THE CITY OF WAUCHULA, a Florida municipality located at 126 South 7th Avenue, Wauchula, Florida 33873 (“Owner”) and \_\_\_\_\_, a [STATE OF INCORPORATION] corporation with principal offices at \_\_\_\_\_ [ADDRESS OF CONTRACTOR] (“Contractor”).

Whereas, the Owner requires the services of a contractor to replace watermains, services, meters, and fire hydrants along Louisiana Street, Oak Street, Florida Avenue, 10th Avenue, 9th Avenue, 8th Avenue, and 7th Avenue in Wauchula, Florida; and

Whereas, the Owner issued an Invitation for Bid and all associated Bid Documents for the Work titled “City of Wauchula – Service Area 3 Watermain Rehabilitation Phase 2;” and

Whereas, the Contractor submitted a Bid in response to such Work, which was opened and accepted by Owner on \_\_\_\_\_, 2023; and

Whereas, pursuant to section 287.05701, Florida Statutes, the Owner is prohibited from, and has not requested documentation of or considered, any vendor’s social, political, or ideological interests when determining whether the vendor is a responsible vendor. Moreover, the Owner has not given preference to any vendor based on the vendor’s social, political, or ideological interests; and

Whereas, the Owner has determined that the Contractor’s Bid is the lowest responsive and responsible Bid for the Work and has issued the Contractor a Notice of Award to such effect;

Therefore, the Owner and the Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

## SECTION 2.1: WORK

### 2.1.1 Completion of Work

- A. Contractor shall complete all Work as specified or indicated in the Contract Documents. Contractor’s scope of services on the Work shall not substantially differ from Contractor’s Bid unless agreed to in writing by the Parties or as otherwise the principal features of the Work are described as:
  1. Replacement of watermains, services, meters, and fire hydrants along Louisiana Street, Oak Street, Florida Avenue, 10th Avenue, 9th Avenue, 8th Avenue, and 7th Avenue as shown in the contract documents.

## SECTION 2.2: CONTRACT PRICE

### 2.2.1 Contract Price

- A. The Contractor shall perform the work for a not-to-exceed Contract Price of \_\_\_\_\_ [CONTRACT PRICE], or as may be amended in accordance with the Contract Documents, subject to the availability of lawfully appropriated funds.

#### 2.2.2 Quantities

- A. The Contract Price includes the Contractor's Bid Price. For items of the Work that are Unit Price, the prices shown on the Bid Form shall be used in determining the final Contract Price. As stated in the Bid Documents, estimated quantities provided on the Bid Form by the Owner are not guaranteed quantities. Actual quantities used in the Work may vary.
- B. Regularly during the Work, and upon the Owner's review of the Final Application for Payment, the Owner, or its designated representative, will determine actual quantities used in the Work, and the Owner may issue a Change Order if required to alter the Contract Price.

### SECTION 2.3: CONTRACT TIME

#### 2.3.1 Time of the Essence

- A. Term: The term of this Agreement shall commence on the Effective Date set forth above and shall continue through the completion of the improvements in accordance with the timelines set forth in the Contract Documents.
- B. All time limits for Milestones, if any, Substantial Completion, and Final Completion and readiness for final payment as stated in the Contract Documents are of the essence.
- C. As further stated in Section 3.19.20 below, the Owner's agreement to an extension of any applicable deadline for Milestones, if any, Substantial Completion, or Final Completion, among any other deadlines provided herein, shall not constitute a waiver of the Owner's right to enforce the Contractor's compliance with other deadlines as provided herein, nor shall the Owner's failure to enforce compliance with any particular deadline or event operate as acquiescence or waiver of the Owner's right to enforce the Contractor's compliance with other such deadlines.

#### 2.3.2 Days to Achieve Substantial Completion and Final Payment

- A. The Work will be required to have reached Substantial Completion within 320 calendar days after the issuance of the Notice to Proceed, and completed and ready for final payment in accordance with the Contract Documents within 350 calendar days after the date when the Contract Time commences to run.

### SECTION 2.4: CONTRACT ROLES AND RESPONSIBILITIES

The Owner and the Contractor may alter or amend the individuals named herein, or name additional representatives, by promptly providing written notice to the other party of any changes.

The following individuals shall have the responsibilities set forth in the Contract Documents for their respective roles:

2.4.1 Contract Administrator:

Name: Olivia Minshew, City Manager  
Agency/Company: City of Wauchula  
126 South 7<sup>th</sup> Avenue  
Wauchula, FL 33873  
(863) 773-3131

2.4.2 Project Engineer:

Name: Jamison Tondreault, PE  
Agency/Company: Kimley-Horn and Associates, Inc.  
109 South Kentucky Avenue  
Lakeland, FL 33801  
(863)-226-6877

2.4.3 Grant Administrator:

Name: Kristin LaCross, Senior Funding Manager  
Agency/Company: Angie Brewer & Associates, LC  
9080 58<sup>th</sup> Drive East, Suite 200  
Bradenton, FL 34202  
(941) 756-5800 ext. 775

2.4.4 Contractor's Representative:

Name: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]  
Agency/Company: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]

2.4.5 Contractor's Supervisor:

Name: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]  
Agency/Company: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]

## SECTION 2.5: CONTRACT DOCUMENTS

2.5.1 Contents

- A. The following shall comprise the Contract Documents. The Owner shall generally consider this order of precedence in resolving any conflicts, errors or discrepancies:
1. Executed Amendments, Change Orders and Work Change Directives
  2. This executed Agreement
  3. Addenda to the Bid Documents
  4. Florida Department of Environmental Protection Supplementary Conditions

5. Terms and Conditions, including the following Exhibits and Attachments thereto
  6. Notice of Award
  7. Notice to Proceed
  8. Payment Bond and Performance Bond
  9. Owner issued Purchase Orders
  10. Owner's Technical Specifications, Drawings, Plans, Exhibits and Attachments
  11. Contractor's Bid in response to the Invitation for Bid, including the Bid Form
- B. The figure dimensions on drawings shall govern over scale dimensions. Contract and detailed drawings shall govern over general drawings. The Contractor shall perform any Work that may reasonably be inferred from the Contract as being required, whether or not it is specifically called for, at no additional cost to the Owner. Work, materials or equipment described in words that, so applied, have a well-known technical or trade meaning shall be taken as referring to such recognized standards.
- C. By signing the Agreement, the Contractor represents that it has carefully examined the Contract Documents and agrees to perform the Work in accordance with the Contract Documents, as may be amended from time to time.

## SECTION 2.6: NOTICES AND CORRESPONDENCE

### 2.6.1 Transmission Method

- A. All notices required or permitted under this Contract shall be in writing and shall be deemed received if sent by one of the following means: upon receipt if delivered by hand; one day after being sent by an express courier with a reliable system for tracking delivery; three days after being sent by certified or registered first class mail, postage prepaid and return receipt requested; or upon confirmed facsimile transmission provided that a copy shall be sent by another of the foregoing means.
- B. All notices shall be addressed by a party to the other party as indicated below. Either party may change its address from time to time upon prior written notice to the other specifying the effective date of the new address.

Owner

Attention: Olivia Minshew, City Manager  
Address: City of Wauchula  
126 South 7<sup>th</sup> Avenue  
Wauchula, FL 33873

Contractor

Attention: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]  
Address: [TO BE COMPLETED BY OWNER PRIOR TO EXECUTION]

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate on the Effective Date first stated above.

OWNER

CONTRACTOR

By \_\_\_\_\_

By \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

(Corporate Seal)

(Corporate Seal)

\_\_\_\_\_  
Attest

\_\_\_\_\_  
Attest

[END OF SECTION]

DIVISION 3:  
TERMS AND CONDITIONS

## SECTION 3.1: DEFINED TERMS

### 3.1.1 Definitions

- A. Words and terms defined in this section shall have the same meaning throughout all parts of the Contract Documents. Where intended to convey the meaning consistent with that set forth in its definition, a defined word or term is marked by initial capitalization. DIVISION 6: TECHNICAL SPECIFICATIONS may define additional words and terms where necessary to clarify the Work. Unless otherwise stated in the Contract Documents, definitions set forth in DIVISION 6: TECHNICAL SPECIFICATIONS shall apply only within DIVISION 6: TECHNICAL SPECIFICATIONS.
1. Addendum/Addenda: A change or changes to the Solicitation issued in writing by the Owner and incorporated into the Solicitation and Contract Documents.
  2. Administrative Work: Actions primarily performed in an office environment and associated with preparing to perform or administer the Work including, but not limited to, preparing Work schedules, obtaining bonds, executing Contracts, securing resources and other actions specified in the Bid Documents, or otherwise prudent to ensure a timely, safe and otherwise compliant start and performance of Field Work. Administrative Work is not performed at the Work Location.
  3. Application for Payment: A document seeking payment to Contractor from Owner for all or a portion of the Work, in accordance with the Contract Documents, and including at a minimum the following items: the Contractor name and address, a description of the product(s) or service(s) rendered, a valid Owner PO number, the amount payable, the payee name and address, any associated forms and any other supporting documentation required by the Contract Documents.
  4. Approved Schedule: The approved progress schedule for performance of the Work approved by the Owner or the Owner's Representative, as most recently amended.
  5. Bid Documents/Bidding Documents: The documents titled Instructions to Bidders, the Invitation for Bid, the Bid Form, all sample forms to be included in the Bidder's Bid, the sample Contract Documents, including Technical Specifications and forms included to provide the Bidder with a complete understanding of the Work requirements, excluding any technical data or test results that are provided as additional information regarding Work Location conditions.
  6. Bid or Proposal: The document, including all forms and information, describing the Bidder's offer and submitted in response to this Invitation for Bids. Bid and Proposal shall be considered synonymous for the purpose of this Contract.
  7. Bid Price: The total dollar amount of the Bidder's offer including, but not limited to, all labor, materials, overheads, profits, other expense, and any and all other cost items incurred by the Bidder in successfully performing the Work in accordance with the Contract Documents.

8. Bidder: The respondent to this Solicitation.
9. Bond: A financial mechanism to guarantee a contractual obligation.
10. Change Order: A written order issued by the Owner after execution of the Contract to the Contractor, as may be recommended by the Engineer, signed by the Owner and authorizing an addition, deletion, or revision of the Work, or an adjustment in the Contract Price or the Contract Time. An executed Change Order resolves all issues related to price and time for the work included in the Change Order.
11. Contract: The Agreement for the Work executed by the Owner and Contractor as included in these Contract Documents.
12. Contract Administrator: The individual assigned by Owner, who is an employee of the Owner, to have authority over the Contract, including the authority to negotiate all elements of the Contract with the Contractor, authorize Change Orders within the maximum amount awarded, terminate the Contract, seek remedies for nonperformance including termination, and otherwise act on behalf of the Owner in all matters regarding the Contract. The Contract Administrator may authorize an Engineer and/or other Owner's Representative in writing to make minor changes to Field Work with the intent of preventing Work disruption.
13. Contract Documents: Contract Documents means the documents set forth in the executed Agreement form.
14. Contract Price: The total amount payable to the Contractor under the Contract, as set forth in the Agreement form, as most recently amended.
15. Contract Time: The number of calendar days or the period of time from when the written Notice to Proceed is issued to the Contractor to the date Contractor has agreed to complete the Work, as stated in the Agreement form, as most recently amended.
16. Contractor: The legal person, firm, corporation or any other entity or business relationship with whom the Owner has executed the Contract. Where the word "Contractor" is used it shall also include permitted successors and assigns.
17. Contractor Representative: The individual responsible for representing the Contractor in all activities concerning the fulfillment and administration of the Contract.
18. Contractor Supervisor: The individual employed or contracted by the Contractor to manage the Work on a day-to-day basis and ensure the Work is performed according to the Contract. The Contractor Supervisor may be authorized by the Contractor Representative to act on Contract matters. Such authorization shall be in writing and delivered to the Engineer and shall clearly state the limitations of any such authorization. In the event that the Contractor Supervisor and the Contractor



Representative is the same person, the Contractor shall notify the Engineer of such situation.

19. Defect or Defective: When used to modify the "Work," whether in lowercase or uppercase, Work that fails to meet the requirements of any required test, inspection or approval, and any Work that meets the requirements of any test or approval, but nevertheless does not meet the requirements of the Contract Documents.
20. Engineer: The individual assigned by the Owner (either an employee or a third party), who is a licensed professional engineer in the State of Florida, to provide engineering, design review, and/or construction management including, but not limited to, overseeing and resolving engineering/design issues with the Engineer for the Work, and conveying the Owner's instructions to the Contractor.

The Engineer's authority includes interpreting the technical portion of the Contract Documents, deciding on matters relating to the execution and progress of the Work and evaluating the Contractor's performance. The Engineer may stop the Work when deemed necessary by the Owner. The Engineer will receive and adjudicate any claim of ambiguity or error in the technical portion of the Contract Documents and shall reduce any determination to writing, and shall make a recommendation to the Owner. The Engineer is not a party to the Contract. The Engineer has no authority to approve changes to the Contract Price or Contract Time, or to commit the Owner to any expenditure of money except as expressly designated in writing by the Contract Administrator.

21. Environmental Requirements: All laws, ordinances, statutes, codes, rules, regulations, agreements, judgments, orders, and decrees, now or hereafter enacted, promulgated, or amended, of the United States, the states, the counties, the cities, or any other political subdivisions in which the Work Location is located, and any other political subdivision, agency or instrumentality exercising jurisdiction over the Owner, the Work Location, or the use of the Work Location, relating to pollution, the protection or regulation of human health, natural resources, or the environment, or the emission, discharge, release or threatened release of pollutants, contaminants, chemicals, or industrial, toxic or hazardous substances or waste or Hazardous Materials (as defined in this Contract) into the environment (including, without limitation, ambient air, surface water, ground water or land or soil).
22. Equal Item: Item a Bidder chooses to offer in place of offering the brand name or manufacturer's item specified on the Bid Document when the Bid Document clearly states that the Bidder may offer such an item.
23. Ex Parte Communication: Any communication pertaining to this Solicitation between a Bidder or protester (or their respective employees, agents, or representatives, or someone otherwise acting on behalf of Bidder) and the Owner (its members, employees, agents, and representatives other than the designated Owner representatives in the Solicitation), during the Solicitation period through the

Contract Award, and/or from the initiation of a protest through Contract Award or through protest resolution.

24. Field Order: An order given by the Owner's Representative, in writing or orally, to direct progress of the Work. A Field Order may authorize only minor variations to the Work as needed to ensure progress, and does not authorize the Contractor to incur additional costs, change the Contract Price or Contract Time.
25. Field Work: Actions associated with meeting the requirements of the Contract other than Administrative Work. Field Work is primarily performed at the Work Location.
26. Final Acceptance: The Owner's written notice to the Contractor that all Work as specified in the Contract has been completed to the Owner's satisfaction. Approval or recognition of the Contractor meeting a milestone or interim step does not constitute Final Acceptance of the Work. Final Acceptance is only applicable to the entirety of Work as specified in the Contract. Final Acceptance does not in any way limit the Owner's rights under the Contract or applicable laws, rules and regulations.
27. Final Completion: The point in time after which the Owner has accepted the Work, in accordance with DIVISION 3: TERMS AND CONDITIONS and the Contractor has fulfilled all requirements of the Contract Documents.
28. Hazardous Materials: Any substance which is or contains (i) any "hazardous substance" as now or hereafter defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. '9601 et seq.) ("CERCLA") or any regulations promulgated under or pursuant to CERCLA; (ii) any "hazardous waste" as now or hereafter defined in the Resource Conservation and Recovery Act (42 U.S.C. '6901 et. seq.) ("RCRA") or regulations promulgated under or pursuant to RCRA; (iii) any substance regulated by the Toxic Substances Control Act (15 U.S.C. '2601 et seq.); (iv) gasoline, diesel fuel, or other petroleum hydrocarbons; (v) asbestos and asbestos containing materials, in any form, whether friable or non-friable; (vi) polychlorinated biphenyls; (vii) radon gas; and (viii) any additional substances or materials which are now or hereafter classified or considered to be hazardous or toxic under Environmental Requirements (as hereinafter defined) or the common law, or any other applicable laws relating to the Licensed Property. Hazardous Materials shall include, without limitation, any substance, the presence of which on the Licensed Property, (A) requires reporting, investigation or remediation under Environmental Requirements; (B) causes or threatens to cause a nuisance on the Licensed Property or adjacent property or poses or threatens to pose a hazard to the health or safety of persons on the Licensed Property or adjacent property; or (C) which, if it emanated or migrated from the Licensed Property, could constitute a trespass.
29. Holidays: The following days: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.

30. Instructions to Bidders: The division of the Bid Documents labeled Instructions to Bidders.
31. Inspector: The individual(s) or company(ies) designated by the Contract Administrator to inspect and test the Contractor's performance and Contract compliance including materials, workmanship, safety, environmental compliance, project controls, administration and accounting, and other aspects of Contract compliance. The Inspector has no authority to approve changes to the Work, the Contract Price or Contract Time, or to commit the Owner to any expenditure of money except as expressly designated in writing by the Contract Administrator. The Inspector may or may not be the same individual as the Engineer. The Contract Administrator may give the Engineer authority to appoint an Inspector.
32. Notice of Award: The issuance of a Notice of Award by the Owner to the successful Bidder notifying the Contractor that they have been authorized by the Owner to perform the work. A Notice of Award shall not be considered a Notice to Proceed.
33. Notice to Proceed: The written notice duly authorized and delivered by the Owner that authorizes the Contractor to begin Field Work. When indicated by the Owner, a PO may also serve as a Notice to Proceed.
34. Owner: The City of Wauchula.
35. Owner's Representative: The Engineer, Inspector, and other persons designated by the Contract Administrator as the Owner's Representative acting in a capacity related to the Work or Contract under the authority of the Contract Administrator.
36. Overtime: Work approved in writing by the Contract Administrator that is required to be performed beyond an employee's scheduled workday or work week, including Work performed on Holidays.
37. Payment Bond: The statutory Performance Bond contemplated by Section 255.05, *Florida Statutes*.
38. Performance Bond: The statutory Payment Bond contemplated by Section 255.05, *Florida Statutes*.
39. Preconstruction Meeting: A meeting conducted after Award and prior to the start of any Field Work between the Owner and the Contractor. The purpose of the meeting may include, but is not limited to orientation, schedule, certification and permitting, and other preparatory or Work execution details.
40. Purchase Order (PO): A Work authorization document issued by the Owner with the words "Purchase Order" clearly marked across the top, a PO number used for reference shown on the front, a description of the Work or a listing of the applicable Contract Documents, an authorized Owner signature and stating the amount of lawfully authorized funds.

41. Quality Assurance: Actions that the Owner takes to assess the Contractor's performance under the Contract.
42. Quality Control: Actions that the Contractor takes to ensure it successfully completes the Work in full accordance with the Contract Documents.
43. Resident Project Representative (RPR): An employee or agent of the Engineer at the Work Location, acting as directed by and under the Engineer. The RPR's authority for this Contract is set forth in DIVISION 3: TERMS AND CONDITIONS.
44. Shop Drawings: Drawings, electronic and hard copy, that detail the fabrication, erection, layout and setting drawings; manufacturer's standard drawings; schedules; descriptive literature, catalogs and brochures; performance and test data; wiring and control diagrams; all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and method of construction as may be required to show the Engineer that the proposed materials, equipment or systems and the position thereof are in compliance with the requirements of the Contract Documents.
45. Site: The Work Location.
46. Solicitation: The Invitation for Bids (which may be electronic) issued by the Owner, or by a third-party on behalf of the Owner, to solicit Bids or Proposals from Bidders that includes the Bid Documents.
47. Specifications: The provisions contained in the Technical Specifications.
48. Standard of Care: The standards of skill and care ordinarily followed by contractors performing similar services for a project of similar scope and complexity in the same geographical area of the Work during the time in which the Work is performed.
49. Subcontractor: A provider of services or materials performing Work under contract for the Contractor.
50. Substantial Completion: The time when the Owner determines that the Work (or a specified part thereof) is sufficiently complete to be utilized for the purposes for which it is intended or ready for the Owner or other contractors to perform subsequent portions of the Work as stated in the Contract Documents. Recognition of the Work as Substantially Complete, as evidenced by issuance of a Certificate of Substantial Completion, does not represent the Owner's Final Acceptance of the Work. The Water Mains shall be cleared and services should be online.
51. Term: The period of time during which the Contract is in force, from formal Notice of Award to Final Completion, or termination. In some cases, and as expressly stated, some of the Contract requirements may extend beyond the Term of the Contract.

52. Technical Specifications: The division of the Contract Documents collectively labeled as the Technical Specifications, including any exhibits and attachments thereto. Technical Specifications have been prepared by the Owner or a third-party.
53. Unit Prices: The Bidder's charges, rounded to the nearest cent, to the Owner for the performance of each respective unit of Work as defined on the Bid Form for all items required for successfully performing the Work through Final Acceptance.
54. Work: Work includes the scope set forth in the Contract Documents together with all other additional necessities that are not specifically recited in the Contract, but can be reasonably inferred as necessary to complete all obligations and fully satisfy the intent of the Contract.
55. Work Change Directive: Written authorization recommended by the Engineer and signed by the Owner and issued to the Contractor after the Contract Effective Date recommending an addition, deletion or revision in the Work. A Work Change Directive shall not change the Contract Price or Contract Time, but shall be evidence that the parties expect the change ordered or documented to be incorporated into a subsequent Change Order.
56. Work Location: The place or places where the Work is performed, excluding the properties of the Contractor and/or the Subcontractor(s).

## SECTION 3.2: PRELIMINARY MATTERS

### 3.2.1 Payment Bond and Performance Bond

- A. Within five (5) business days of receipt of Contract Documents, the Contractor shall furnish a Payment Bond and a Performance Bond in an amount equal to one-hundred percent (100%) of the amount of the Contract Price, made out to the Owner in forms and formats approved by the Owner, as security for the faithful performance of the Work of Contract, in accordance with Section 255.05, *Florida Statutes*. In no case shall the date on the bonds form be prior to that of the executed Contract. The surety must be authorized and licensed to transact business in Florida.
- B. A fully executed Payment Bond and Performance Bond must be recorded with the Clerk of Hardee County Court and delivered to the Owner before Work may commence. If the Contractor fails or refuses to furnish or record the required bonds, the Owner will retain the Contractor's Bid Security as liquidated damages.

### 3.2.2 Liquidated Damages

- A. If the Contractor fails to Substantially Complete the Work on or before the substantial completion date set forth in the Contract Documents, the Contractor shall pay the Owner the sum of \$500.00 per day for each and every calendar day, including Sundays and

Holidays, starting on the contracted substantial completion date and continuing until the date that the Work is Substantially Completed.

- B. Following Substantial Completion, if the Contractor fails to complete any remaining Work within the Contract Time, the Contractor shall pay the Owner \$500.00 per day for each and every calendar day, including Sundays and Holidays, starting on the contracted final completion date and continuing until the date that the Work is completed.
- C. The Contractor understands and agrees that said daily sum is to be paid not as a penalty, but as compensation to the Owner as fixed and reasonable liquidated damages for losses that the Owner will suffer because of such default, whether through increased administrative and engineering costs, interference with the Owner's normal operations, other tangible and intangible costs, or otherwise, which costs are otherwise impossible or impractical to measure or ascertain with any reasonable specificity.
- D. Liquidated damages may, at the Owner's sole discretion, be deducted from any monies held by the Owner that are otherwise payable to Contractor.
- E. The Contractor's responsibility for liquidated damages shall in no way relieve the Contractor of any other obligations under the Contract.

### 3.2.3 Preconstruction and Progress Meetings

- A. Before starting field work, a preconstruction meeting will be held to: review the work; to review the work schedule; to establish procedures for submitting items including but not limited to applications for payment, the schedule of submittals, approving the applications for payment, and making payments; and, to establish a working relationship between the Owner and the Contractor.
- B. The Preconstruction Meeting shall be attended by, but not limited to, the Owner, the Engineer, the Contractor Representative and the Contractor Supervisor. The Contract Administrator will notify the Contractor in writing of the meeting time and location at least two (2) days prior to the meeting date.
- C. Construction progress meetings will be held at a frequency determined by the Owner, but shall not be more often than once per week. Such meeting(s) shall be attended by, but not limited to, the Owner, the Engineer, and the Contractor's Supervisor.

### 3.2.4 Contractor Review of Project Requirements

- A. The Contractor shall review the Work requirements and specifications prior to commencing Work. The Contractor shall immediately notify the Engineer in writing of any conflict with applicable law, or any error, inconsistency or omission it may discover. The Owner will promptly review the alleged conflicts, errors, inconsistencies or omissions, and

issue a Change Order or Purchase Order, as appropriate if the Owner is in agreement with the alleged conflict, and issue revised specifications. Any Work the Contractor performs prior to receipt of approved Change Order or Purchase Order will be at the Contractor's sole risk and will not be reimbursed.

- B. The Contractor agrees that it will provide sufficient personnel to perform the Work and that it will perform the Work in a manner consistent with the Standard of Care set forth above and with the Approved Schedule. The Owner shall not be responsible for any delays caused by the Contractor's failure to adequately staff the Work.

### 3.2.5 Contractor's Documents at the Work Location

- A. The Contractor shall maintain at the Work Location for the Owner one record copy of all Contract Documents in good order and marked currently to record all Addenda and changes made during the Contract Term. The Contractor shall include copies of all Change Orders, Work Change Directives, Field Orders, and other written clarifications or interpretations with these record documents. These shall be available to the Owner's Representatives and shall be delivered to the Engineer upon completion of the Work or at the request of the Engineer. The Owner and the Owner's Representatives may use such documents in reviewing the Contractor's final Application for Payment.
- B. The Contractor shall also maintain detailed records of the Work for its own files. The Contractor shall make these records available to the Owner for inspection upon request. The Contractor shall maintain such records for three years after the final completion date.

### 3.2.6 Contractor's Field Office

- A. The Contractor shall provide its own office facilities at the Work Location, as required. Unless specifically listed herein, the Owner provides no Work Location facilities or Work Location area for the Contractor facilities of any kind such as field office and material storage. If the Contractor establishes a Work Location-based office, the Contractor shall provide and maintain adequate telephone facilities at this office during the full Term of the Contract. If the Contractor has a local business office, this office may serve as a Work Location office for this Contract, but the Contractor must maintain an operational cellular phone at the Work Location while performing Work.

### 3.2.7 Commercial Activities on the Work Location

- A. The Contractor shall not establish any commercial activities, or issue concessions or permits of any kind to third parties to establish commercial activities on lands owned or controlled by the Owner, or within the boundaries of the Work Location. The Contractor shall not allow its employees to engage in any commercial activities on the Work Location.

### 3.2.8 Compliance with Referenced Specifications

- A. All Work, materials, systems or operations specified by reference to standard trade specifications or to manufacturer's published specifications shall comply with the

requirements of the referenced specifications, except as modified by the requirements of this Contract. The referenced specification used shall be the latest published edition that is in effect on the effective date of this Contract unless a particular edition is specified. In case of a conflict, the specifications that contain the more stringent requirements will govern.

### 3.2.9 Licenses

- A. The Contractor shall comply with all licensing and/or certification requirements pursuant to applicable laws, rules and regulations. The Contractor shall secure all licenses as required for the performance of the Work and shall pay all fees associated with securing them. The Contractor shall produce written evidence of licenses and other certifications immediately upon request from the Owner.
- B. The Contractor shall ensure that any subcontractors or subconsultants retained to provide labor, services, or material for the Work are fully licensed and certified, as applicable.

### 3.2.10 Limitation of Accuracy of Informational Materials

- A. For all drawings, test results, inspections, and other informational materials included as part of the Contract Documents, the Contractor understands and agrees that any existing facilities shown, including underground, overhead, and surface structures, and other delineations, and any other informational items provided as part of the Contract Documents are for reference only and are not to be used by the Contractor as the only indication of Work conditions.
- B. Unless otherwise stated, the data furnished by the Owner or the Engineer to the Contractor, or by the Contractor to the Owner or the Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

### 3.2.11 Permits

- A. The Contractor shall secure, maintain, post as required, and pay for all building, plumbing, electrical, right-of-way, parking, roadway, railroad, shipping, freight, hazardous materials, and all other permits required for performance of the Work in full compliance with all applicable laws, rules and regulations. The Contractor shall perform all actions necessary to identify where permits are to be obtained and properly file for the permits.
- B. The Contractor shall comply with all conditions of permits issued for the Work, either directly or indirectly, issued by federal, state, or local governmental agencies, which are hereby incorporated as part of these Contract Documents. The Contractor shall be solely responsible for resolving any issues and bearing all expenses including any damages



suffered by the Owner that result from a finding of noncompliance during performance of the Work by any of the respective regulatory agencies including, but not limited to, all costs for delays, litigation, fines, fees of any kind, and other costs.

### 3.2.12 Work Information

- A. In the event the Contractor requires additional information regarding the scope, technical specifications, Work Locations, personnel requirements, or other information pertinent to the Work or Contract, the Contractor shall request such information or clarifications from the Engineer in writing. Within the bounds of the Engineer's authority, the Engineer may provide the requested information to the Contractor.

### 3.2.13 Engineer's RPR Status During Construction

- A. The RPR shall have the responsibilities set forth herein for this Contract.
- B. Review the progress schedule, schedule of Shop Drawings, and Sample Submittals and Schedule of Values prepared by the Contractor and consult with the Engineer concerning acceptability.
- C. Attend conferences and meetings with the Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
- D. Serve as the Engineer's liaison with the Contractor, working principally through the Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents. Assist the Engineer in serving as the Owner's liaison with the Contractor when the Contractor's operations affect the Owner's on-site operations. Assist in obtaining additional details or information from the Owner, when required for proper execution of the Work.
- E. Report to the Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to the Contractor clarifications and interpretations issued by the Engineer.
- F. Record the date of receipt of Samples and approved Shop Drawings. Receive Samples which are furnished at the Site by the Contractor. Notify the Engineer of availability of Samples for examination. Notify the Engineer and the Owner if work is begun without reviewed shop drawings.
- G. Consider and evaluate the Contractor's suggestions for modifications in the Drawings or Specifications and report such suggestions together with RPR's recommendations to the Engineer. Transmit in writing to the Contractor decisions as issued by Engineer.
- H. Review of Work and Defective Work:

1. Conduct on-site observations of the Contractor's work in progress to assist the Engineer in determining if the Work is, in general, proceeding in accordance with the Contract Documents.
  2. Report to the Engineer whenever RPR believes that any part of the Contractor's work does not conform to the Contract Documents or will imperil the integrity of the Work as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; advise the Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- I. Inspections, Tests and System Startups:
1. Verify that tests, equipment and system start-ups and operating and maintenance training are conducted in the presence of appropriate the Owner's personnel and that the Contractor maintains adequate records thereof.
  2. Observe, record, and report to the Engineer appropriate details relative to the test procedures and system start-ups.
- J. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all of the Contractors, Subcontractors and materials and equipment Suppliers. Maintain records for use in preparing Work documentation.
- K. Reports:
1. Furnish to the Engineer periodic reports as required of progress of the Work and of the Contractor's compliance with the Progress Schedule and Schedule of Shop Drawings and Sample Submittals.
  2. Draft and recommend to the Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from the Contractor.
  3. Immediately notify the Engineer of the occurrence of any Site accidents, emergency, acts of God endangering the Work, damage to property, or discovery of Hazardous Materials.
- L. Review Applications for Payment with the Contractor for compliance with the established procedure for their submission and forward with recommendations to the Engineer, noting particularity the relationship of the payment requested to the Schedule of Values, Work completed and materials and equipment delivered at the Site but not incorporated in the Work.

- M. During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by the Contactor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to the Engineer for review and forwarding to the Owner prior to payment for that part of Work.
- N. Completion:
1. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of list of items to be completed or corrected.
  2. Participate in a final inspection in the company of the Engineer, the Owner and the Contractor and prepare a final list of items to be completed and deficiencies remedied.
  3. Observe whether all items on final list have been completed or corrected and make recommendations to the Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.
- O. Limitations of the RPR's Authority: The RPR shall not:
1. Authorize any deviation from the Contract Documents or substitute of material or equipment (including "or-equal" items).
  2. Exceed limitations of the Engineer's authority as set forth in the Contract Documents.
  3. Undertake any of the responsibilities of the Contractor, the Subcontractors, the Suppliers or the Contractor's Superintendent.
  4. Advise on, issue directions regarding, or assume control over safety practices precautions, and programs in connection with the activities or operations of the Owner or the Contractor.
  5. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by the Engineer.
  6. Accept Shop Drawings or Sample submittals from anyone other than the Contractor.
  7. Authorize the Owner to occupy the Project in whole or in part.
  8. Advise on issue directions, or assume control over means, methods, techniques, sequences, or procedures for the Contractor's Work.

### 3.2.14 Conflict of Interest

- A. No member, officer or employee of the City during his/her tenure or for one (1) year after shall have any interest, direct or indirect, in this contract or proceeds thereof. The Contractor shall also include this statement in all subcontracts for this work.

## SECTION 3.3: SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE

### 3.3.1 Acceptance of Work - After Receipt, Inspection, Usage and Testing

- A. The Contract Administrator will make the determination when Work is completed and there is Final Acceptance by the Owner, with consideration to the Engineer's and the Inspector's recommendations.
- B. Final Acceptance will be made by the Owner only in writing, and after adequate time to ensure the Work is performed in accordance with Contract Documents in accordance with Section 255.077, *Florida Statutes*. The Owner will reject any items delivered by the Contractor that are not in accordance with the Contract, and shall not be deemed to have accepted any items until the Owner has had reasonable time to inspect them following delivery or, if later, within a reasonable time after any latent defects in the work have become apparent.
- C. The Owner may partially accept the Work. If the Owner elects to accept nonconforming items, it may, in addition to other remedies, be entitled to deduct a reasonable amount from the price as compensation for the nonconformity. Any Final Acceptance by the Owner, even if nonconditional, shall not be deemed a waiver, or settlement or acceptance of any Defect.

### 3.3.2 Substantial Completion

- A. The Contractor shall notify the Owner in writing when a portion of the Work is ready for Substantial Completion and can be utilized for the purposes for which it was intended. The Contractor shall identify any deficiencies in the Work. Owner will inspect the Work and will give the Contractor written notice of either acceptance of that portion of the Work or additional deficiencies. The Contractor shall correct all deficiencies prior to Substantial Completion of the Work.
- B. Whenever any portion of the Work is substantially complete and can be utilized for the purpose for which it was intended, the Owner may use it. Such use shall not be held in any way as a Final Acceptance of the Work or as a waiver of any provisions of the Contract.
- C. Upon determination that the Work meets the requirements for Substantial Completion, the Owner will issue a Certificate of Substantial Completion.

## SECTION 3.4: PRICE & PAYMENTS

### 3.4.1 Application for Payment and Payment Terms

- A. The Contractor shall submit to the Engineer or the Engineer's RPR all Applications for Payment using the prescribed forms included in the Contract Documents and in accordance with the payment method agreed upon in these Contract Documents. The Owner will pay the Contractor the amount requested less any authorized deductions or retainage set forth in the Contract Documents within thirty (30) days after receipt of an acceptable Application for Payment from the Contractor subject to the provisions stated below.
- B. The Owner may reject any Application for Payment within twenty (20) calendar days after receipt. The Owner will return the Application for Payment to the Contractor stating the reasons for rejection. Upon receipt of an acceptable revised Application for Payment, the Owner will pay the Contractor the revised amount within ten (10) calendar days.
- C. The Owner may withhold payment if the Owner reasonably believes the Contractor is in violation of any conditions or terms of the Contract Documents. Reasons for withholding payment to the Contractor include, but are not limited to, a reasonable belief by the Owner that it may suffer damages as a result of potential or actual claims attributable to the Contractor; inability of the Contractor to complete the Work in a timely manner; or any failure of the Contractor to perform its obligations hereunder. If the Owner reasonably believes Contractor is in violation of any conditions or terms of the Contract Documents and the Owner wishes to withhold payment from the Contractor, the Owner shall (i) provide the Contractor at least ten (10) days written notice of the Owner's intent to withhold such amount which states the basis for such withholding; and (ii) afford the Contractor an opportunity to cure or otherwise address the Commission's concerns.
- D. The Application for Payment may be subject to the review of the Owner's Representative..

#### 3.4.2 Retainage

- A. Pursuant to Section 255.078, *Florida Statutes*, as additional security for the proper performance of the Work, the Owner may deduct up to five percent (5%) retainage from the amount stipulated in the Invoice or Application for Payment and accepted by the Owner as eligible for payment.
- B. In the case of early termination of the Contract, all payments made by the Owner against the Contract Price prior to notice of termination shall be credited to the amount, if any, due the Contractor. If the parties determine that the sum of all previous payments and credits exceeds the sum due the Contractor, the Contractor shall refund the excess amount to the Owner within ten (10) calendar days of determination or written notice.

#### 3.4.3 Payment Method - Progress Payments and Schedule of Values

- A. For the purposes of this Contract, the Contractor shall refer to the DIVISION 6: TECHNICAL SPECIFICATIONS.

#### 3.4.4 Final Application for Payment

- A. After the Contractor has, in the opinion of the Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up as-built record documents and other documents, the Contractor shall complete and submit to the Owner the final Application for Payment with consent of surety for final payment as notice that the Work, including the correction of all deficiencies, is complete. By submitting the final Application for Payment, the Contractor certifies the following:
1. That the Work has been satisfactorily completed;
  2. That no liens have attached against the property and improvements of the Owner;
  3. That no notice of intention to claim liens are outstanding;
  4. That no suits are pending by reason of the Work;
  5. That all workers' compensation claims known to the Contractor have been reported to the Owner;
  6. That the surety provides a release; and
  7. That no public liability claims are pending.
- B. Within ten (10) calendar days of receipt of the Contractor's final Application for Payment, the Engineer shall review the final Application for Payment and make a recommendation to the Owner. The Owner shall make final payment to the Contractor in accordance with the Application for Payment provisions of the Contract.

#### 3.4.5 Prompt Payment to Subcontractors and Suppliers

- A. When the Contractor receives payment from the Owner for labor, services or materials furnished by Subcontractors and Suppliers that are hired by the Contractor, the Contractor shall remit payment due (less proper retainage) to those Subcontractors and Suppliers within fifteen (15) calendar days after the Contractor's receipt of payment from the Owner and obtain a Release of Lien for each payment made. Nothing herein shall prohibit the Contractor from disputing, pursuant to the terms hereof, all or any portion of a payment alleged to be due to its Subcontractors and Suppliers. In the event of such dispute, the Contractor may withhold the disputed portion of any such payment only after the Contractor has provided written notice to the Owner and to the Subcontractor and Supplier whose payment is in dispute, stating the amount in dispute and specifically describing the actions required to cure the dispute. The Contractor shall deliver such notice to the Owner and to the said Subcontractor or Supplier within ten (10) calendar days following the Contractor's receipt of payment from the Owner. The Contractor shall pay all undisputed amounts due within the time frames specified herein.

- B. The Contractor shall submit a Release of Lien for the prior month's payment included in any Application for Payment.
- C. The prompt payment requirements herein shall, in no way, create any contractual relationship or obligation between the Owner and any Subcontractor, Supplier, or any third-party, nor create any Owner liability for the Contractor's failure to make timely payments as required. The Contractor's failure to comply with the prompt payment requirements, however, shall constitute a material breach of its contractual obligations to the Owner.

#### 3.4.6 Taxes

- A. The Contractor shall include the cost of all applicable State and Local Sales Taxes in the submitted Bid Price. The Owner reserves the right to directly purchase any materials or equipment to reduce project costs due to State and Local Sales Taxes. A deductive Change Order will be drafted to remove any Owner Direct Purchases from the Contract.
- B. The Contractor shall be responsible for the payment of any applicable State and Local taxes relating to the purchase of equipment and materials required for the completion of this project.

#### 3.4.7 Allowances

- A. When the Contract Documents indicate that the Owner has provided the Contractor with an allowance for specified portions of the Work, the Contractor shall provide such Work in a manner acceptable to the Owner.
- B. Allowance items shall include all costs to the Contractor (less any applicable trade discounts), including all applicable taxes, costs for unloading and handling materials and equipment at the Site, labor, installation, overload, profit, and other expenses set forth in the Contract Documents as part of the allowances.

### SECTION 3.5: INSURANCE & INDEMNITIES

#### 3.5.1 Indemnification

The parties agree that 1% of the total compensation paid to the Contractor for the services provided under this Agreement constitutes specific consideration to the Contractor for the indemnification to be provided as set forth in this Section 3.5.

#### 3.5.2 Environmental Indemnity

- A. The Contractor shall hold harmless, indemnify, and defend the Owner and the Engineer, including without limitation, its officers, directors, members, representatives, affiliates, agents and employees, successors and assigns (the "Indemnified Parties") and will reimburse the Indemnified Parties from and against any and all claims, suits, demands, judgments, losses, costs, fines, penalties, damages, liabilities and expenses (including all

costs of cleanup, containment or other remediation, and all costs for investigation and defense thereof including, but not limited to, court costs, reasonable expert witness fees and attorney fees) arising from or in connection with (a) the Contractor's, including, but not limited to, its agents, affiliates or assigns ("Parties"), actions or activities that result in a violation of any environmental law, ordinance, rule, or regulation or that leads to an environmental claim or citation or to damages due to the Contractor's or other Parties' activities, (b) any environmental, health and safety liabilities arising out of or relating to the operation or other activities performed in connection with this contract by the Contractor or any Party at any time on or after the effective date of the contract, or (c) any bodily injury (including illness, disability and death, regardless of when any such bodily injury occurred, was incurred or manifested itself), personal injury, property damage (including trespass, nuisance, wrongful eviction and deprivation of the use of real property) or other damage of or to any person in any way arising from or allegedly arising from any hazardous activity conducted by the Contractor or any Party. The Owner will be entitled to control any remedial action or any proceeding relating to an environmental claim. This indemnification agreement is separate and apart from, and is in no way limited by, any insurance provided pursuant to this Contract or otherwise. This section relating to indemnification shall survive the Term of this Contract, and any holdover and/or Contract extensions thereto, whether such Term expires naturally by the passage of time or is terminated earlier pursuant to the provisions of this Contract.

### 3.5.3 Indemnification

- A. Contractor shall, to the fullest extent permitted by law, indemnify, defend, and hold harmless the Commission from claims, suits, liability, loss, expense, or damages, including all attorneys' fees and costs, arising from the negligent acts or omissions by, the willful misconduct of, or the failure to comply with applicable laws by Contractor or those for whom the Contractor is responsible in the performance of this Agreement. The indemnification required under this Agreement will not be limited in any way by the limits, terms, or conditions of any insurance policy.
- B. Contractor, for itself and on behalf of its agents, employees, subcontractors, and subconsultants, shall to the fullest extent permitted by law indemnify, and hold the Commission harmless from and against any and all losses, expenses, claims, demands, and causes of action, including attorneys' fees and costs, asserted against the Commission by any person (including without limitation, Contractor's employees, Contractor's subcontractors and subconsultants, and employees of such subcontractors and subconsultants, for injury to persons, including death, or for loss of or damage to property or failure of the completed work to perform as required by this Agreement, to the extent arising out of the negligent acts or omissions of Contractor or any entity for which it is responsible in performing the Work, or the violation by Contractor or any entity for which it is responsible of any law, regulation, ordinance, code or standard applicable to the Work. The indemnification required under this Agreement shall not be limited in any way by the limits, terms, or conditions of any insurance policy.
- C. The provisions of Article 3.5.2 shall survive the completion or termination of this Agreement



#### 3.5.4 Insurance Requirements

- A. Before any work commences, and for four (4) years beyond Final Acceptance of the Work, and without limiting its liability under the Contract, the Contractor shall, without in any way altering their liability, obtain, pay for, and maintain insurance for the coverages and amounts of coverage not less than those set forth below, and shall provide the Owner with a Certificate of Insurance and an opportunity to inspect a certified copy of each policy applicable to this Agreement. The Certificate of Insurance must name as an additional insured the Owner and all of its Officers, Agents, and Employees, excluding worker's compensation and professional liability; must provide that such insurance is primary to any other insurance available to the additional insureds with respect to claims covered under the policy; and must provide that such insurance coverage applies separately to each insured against whom claims are made or suit is brought; but the inclusion of more than one insured shall not operate to increase the insurer's limit of liability. The Contractor's and its Subcontractors' Certificates of Insurance shall be mailed to the Owner at City of Wauchula, 126 South 7th Avenue, Wauchula, Florida 33873. To the extent necessary, the Contractor shall thereafter provide the Owner an annual Certificate of Insurance satisfactory to the Owner to evidence such coverage. Such Certificates of Insurance will provide that there shall be no termination, non-renewal, modification or expiration of such coverage without thirty (30) days prior written notice to the Owner.
- B. The Owner shall be named as an additional insured on all of the Contractor's policies related to the project, excluding professional liability and worker's compensation. Such insurance shall be primary to any and all other insurance or self insurance maintained by the Owner.
- C. All policies required under this section must be an "Occurrence" form. The policies shall contain a waiver of subrogation in favor of the Owner.
- D. All insurance coverage shall be written with an insurer having an A.M. Best Rating of at least the "A" category and size category of VIII, and such insurance shall be written by a company or companies licensed to do business in the State of Florida and satisfactory to the Owner. Prior to commencing any Work under this Contract, certificates evidencing the maintenance of the insurance shall be furnished to the Owner for approval.
- E. The Contractor's self-insured retention or deductible per line of coverage shall not exceed \$25,000.00 without the permission of the Owner.
- F. If there is any failure by the Contractor to comply with the provisions of this section, the Owner may, at its option, on notice to the Contractor, suspend the work for cause until there is full compliance.

- G. Owner may, at its sole discretion, purchase such insurance at the Contractor's expense provided that the Owner shall have no obligation to do so and if the Owner shall do so, it shall not relieve the Contractor of its obligation to obtain insurance.
- H. The Contractor shall not be relieved of or excused from the obligation to obtain and maintain such insurance amount and coverages.
- I. To the extent applicable, the Contractor will ensure that all subcontractors comply with the requirements of this Section relating to insurance, and maintain coverage throughout the term of the Service Agreement. All the Contractor's sub-contractors shall be required to include Owner and the Contractor as additional insureds on their General Liability Insurance policies. In the event that subcontractors used by the Contractor do not have insurance, or do not meet the insurance limits, the Contractor shall indemnify and hold harmless the Owner for any claim in excess of the subcontractors' insurance coverage.
- J. The Contractor shall not commence work under this Agreement until all insurance required as stated herein has been obtained and such insurance has been approved by the Owner.
- K. The Contractor shall maintain, at all times, the minimum levels of insurance set forth below:

Schedule	Amount
<u>Workers' Compensation</u>	
Florida Statutory Coverage and Employer's Liability (including appropriate Federal Acts)	Statutory Limits (Workers' Compensation) As required by law (Employer's Liability)
<u>Contractor's General Liability</u>	
Completed Operations and Products Liability Property damage and bodily injury	\$1,000,000/occurrence, \$2,000,000 annual aggregate
<u>Personal Injury Liability</u>	
Property Damage Liability insurance will provide Explosion, Collapse and Underground Hazards (XCU Coverage) as appropriate	
<u>Automobile Liability</u>	
Bodily Injury Property Damage	\$200,000/person, \$400,000/accident \$400,000/accident
<u>Contractual Liability</u>	
Bodily Injury	\$500,000/accident

Property Damage

\$1,000,000 annual aggregate

Builder's Risk Insurance

Amount to be determined by Owner

Umbrella (Excess) Liability Insurance.

Umbrella Liability with limits of not less than \$1,000,000.00, exclusive of defense costs, to be in excess of all other coverages. Such coverage shall be at least as broad as the primary coverages above, with any excess umbrella layers written on a strict following form basis over the primary coverage. All such policies shall be endorsed to provide defense coverage obligations.

- L. The Contractor's General Liability policies shall be effective for four (4) years after the Work is complete. The above Indemnification provision is separate and is not limited by the type of insurance or insurance amounts stated above.

3.5.5 Title and Risk of Loss

- A. Ownership, risks of damage to or loss of the Work shall pass to the Owner upon Final Acceptance of the work. The Contractor shall assume all risk of loss or damage to the Work while items are in transit and/or in the Contractor's custody until such time that the Owner issues written notice of Final Acceptance of the work.

## SECTION 3.6: GENERAL PERFORMANCE OF WORK

3.6.1 Care of Property Owners

- A. The Contractor agrees to provide excellent customer service throughout the execution of the Work during both scheduled Work hours and Overtime in the manner, as a minimum, as set forth below:
  - 1. The Contractor shall notify the affected property owners prior to any planned outages, line flushing, valve simulations and driveway construction. The notification will be produced by the Contractor and approved by the Owner's Representative.
  - 2. Within one (1) business day of receiving a concern from a property owner regarding the Work, the Contractor shall notify the Engineer in writing of each customer concern reported directly to the Contractor's personnel. Such notification shall include, as a minimum: the Contractor's name, date and time the concern was communicated to the Contractor, the name, address and phone numbers for the

affected party, the nature of their concern and any action that was taken or any action currently underway to resolve the concern.

### 3.6.2 Workmanship

- A. In addition to performing its Work in accordance with the Standard of Care, the Contractor shall perform all Work in a safe, workmanlike and professional manner, and so as to render a neat and uniform appearance. The Contractor shall handle all material in such a way as to preserve its finish and protective coatings from damage. General arrangement shall be satisfactory to the Engineer.

### 3.6.3 Work Location Cleanliness

- A. The Contractor shall, at all times, keep the Work Location free from an accumulation of waste materials or rubbish caused by its operations. At the completion of the Work, the Contractor shall remove all waste materials and any rubbish from and about the project, as well as any tools, construction equipment, machinery and surplus materials, in accordance with applicable laws, rules and regulations. If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided elsewhere in the Contract and charge the cost thereof to the Contractor.

### 3.6.4 Surveying

- A. Unless specifically stated in the Contract Documents as being provided by the Owner, the Contractor shall be responsible for all surveying necessary to commence and perform this Work. The Contractor shall employ a land surveyor registered in the State of Florida to reference and restore all property corners and/or monuments that may have been disturbed and to ensure accurate horizontal and vertical control during the construction of this project and for staking locations for new structures. Height and spacing of stakes are to be as specified elsewhere herein or as directed by the Engineer.
- B. All Work shall be done to the lines, grades and elevations shown on the drawings. Any Work improperly located may be ordered removed and replaced at the Contractor's expense. The Contractor shall be responsible for making its own determination of water table variations and shall not assume that any water levels shown by the aforesaid boring data will necessarily be maintained at the level indicated. The Contractor shall investigate the conditions above or below the surface of the ground as it may deem necessary for the proper and timely performance of its Work including, but not limited to, the making of borings.

## SECTION 3.7: SCHEDULES

### 3.7.1 Preliminary Schedules

- A. Within ten (10) calendar days following the Effective Date of the Agreement, the Contractor shall submit to the Engineer the following items:

1. Preliminary Progress Schedule stating days or dates for starting and completing the various stages of the Work in an orderly manner within the Contract Times, indicating any milestones specified in the Contract.
  2. Preliminary Schedule of Submittals, showing a reasonable schedule for reviewing and processing required submittals
  3. Preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and reasonably subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Prices shall include all overhead and profit.
  4. Preliminary Schedule of Progress Payments (Draw Schedule).
- B. No later than ten (10) calendar days prior to the date for the submittal of the first Application for Payment, the Contractor and the Engineer shall meet to review the acceptability of the Progress Schedule, the Schedule of Submittals and the Schedule of Values. The Contractor shall have an additional ten (10) calendar days following such meeting to make any adjustments and to resubmit the schedules.
- C. The Engineer's approval of the any of the Schedules shall not relieve the Contractor of its sole responsibility for the Progress Schedule, the sequence and scheduling of Work, and the progress of the Work.
- D. No progress payments shall be made to the Contractor until the Engineer has approved the Schedules.
- E. Upon reasonable written request from the Owner, the Contractor shall furnish to the Owner such evidence as the Owner may reasonably require relating to the Contractor's ability to fully perform the Work in the manner and within the time specified by this Agreement.

### 3.7.2 Work Days

- A. The work schedule is established on the basis of working five (5) days per week, eight (8) hours per day. The Owner may require the Contractor to base its schedule on an accelerated Work Schedule or multiple shifts. The Contractor shall not schedule work on Holidays without obtaining prior written approval from the Owner.
- B. The Contractor shall, at no additional cost to the Owner, increase or supplement its working force and equipment and perform the Work on an Overtime or multiple shift basis when directed by the Owner and upon notification that the Contractor is behind

schedule. The Contractor shall submit a revised schedule in writing demonstrating the Contractor's schedule recovery plans.

- C. The Contractor understands and agrees that the rate of progress set forth in the Approved Schedule already allows for ordinary delays incident to the Work. No extension of the Contract Time will be made for ordinary delays, inclement weather (except as set forth in Section 19, "Force Majeure"), or accidents, and the occurrence of such events will not relieve the Contractor from the requirement of meeting the Approved Schedule.

### 3.7.3 Changes to the Progress Schedule

- A. The Contractor may submit proposed revisions to the Progress Schedule to the Engineer for review provided that they do not change the Contract Time, and the Engineer may adjust the Progress Schedule from time to time.
- B. Proposed changes to the Progress Schedule that change the Contract Time will only be made in accordance with Section 14, "Changes to Work." Adjustments to the Contract Time shall only be made via Change Order.
- C. The Contractor shall refer to the DIVISION 6: TECHNICAL SPECIFICATIONS for additional information regarding Progress Schedules.

## SECTION 3.8: MATERIALS, TOOLS & EQUIPMENT

### 3.8.1 Temporary Utilities

- A. The Contractor shall furnish and install all temporary water, electricity and other utilities required to accomplish the Work. The Contractor shall obtain the water required for carrying out the Work from fire hydrants, existing water main connections, or new connections approved by the Owner. The Contractor shall install a back flow preventer and water meter assembly if construction water is necessary. Upon Substantial Completion of Work, the Contractor shall remove all evidence of temporary connections and lines.
- B. Prior to initiating any construction Work, the Contractor shall coordinate and schedule the provision of temporary utility service required during construction and arrange for the permanent installation and connection of utilities for the completed Work.

### 3.8.2 Material Delivery Locations

- A. The Contractor shall notify, in writing, the Engineer of all planned material delivery/receiving locations. Such notification shall be prior to initiation of shipment. The Engineer will provide the Contractor with specific written approval for each delivery/receipt location, which will not be unreasonably withheld.

### 3.8.3 Storage of Equipment

- A. The Contractor shall be responsible for all storage of materials, equipment, vehicles, tools, and all other items associated with the Work. Such storage shall comply with applicable regulations appropriate for the items being stored to ensure suitable care for items and protection from theft, vandalism, or inappropriate use. The Contractor is solely responsible for the costs for such storage, unless otherwise indicated in the Contract Documents, and any costs associated with noncompliant storage including, but not limited to, loss and damage to items. In the event that the Owner directs the Contractor to stop the Work, costs associated with storing equipment or materials will be compensated in accordance with the provisions stated herein in Section 14, "Change in Work." The Contractor shall ensure that the Engineer has access to Work-related storage on an as needed basis during regular Work Hours and Overtime.

#### 3.8.4 Contractor Laydown Area

- A. In the event the Contractor decides to utilize public or private property as a laydown area, the Contractor shall enter into a written agreement with the entity or individual who owns the property. The Owner shall have access to all laydown areas. Upon submission of the Contractor's first Invoice or application for payment to the Owner, the Contractor shall provide the Owner with a copy of such signed written agreement. The Contractor shall submit to the Owner a letter of release from the entity in connection with Contractor's final Application for Payment to the Owner.

#### 3.8.5 Substitutions

- A. Whenever materials or equipment are specified or described in the Contract by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required.
- B. Materials or equipment of other suppliers may be accepted by the Engineer if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent or equal to that named.
- C. The Contractor shall make written application to the Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified.
- D. The application shall state that the evaluation and acceptance of the proposed substitute will not prejudice the Contractor's completion of the Work within the Contract Time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other Contract directly with the Owner for Work on the Contract) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fees, royalties, permits or any other costs.

- E. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service shall be indicated.
- F. The application shall also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other Companies affected by the resulting change, all of which shall be considered by the Engineer in evaluating the proposed substitute.
- G. Requests for review of substitute items of material and equipment will not be accepted by the Engineer from anyone other than the Contractor.
- H. The Engineer may require the Contractor to furnish, at the Contractor's expense, additional data about the proposed substitute.
- I. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Engineer, if the Contractor submits sufficient information to allow the Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract.
- J. The Engineer will be allowed a reasonable time within which to evaluate each proposed substitute; such time shall not be deemed justification for an extension of the Contractor's time for completion of the Contract.
- K. The Engineer will be the sole judge of acceptability, and no substitute shall be ordered, installed or utilized without the Engineer's prior written notice, which shall be evidenced by a Change Order.
- L. The Owner may require reimbursement for the cost associated with the Engineer's evaluation of substitutions.
- M. The Owner may require the Contractor to furnish, at the Contractor's expense, special performance guarantee bonds or other surety with respect to any substitution.

#### 3.8.6 Disposition of Salvage Material

- A. All material to be removed from the Work Location, relocated or salvaged, shall be inspected by the Engineer immediately prior to removal, and the Engineer's decision as to the salvageability shall be final. Such material that can be salvaged, in the opinion of the Engineer, shall be stored at the Work Location on-site by the Contractor, as and where directed by the Engineer, or delivered to a location as directed. Under no circumstances may existing structures, plant or facilities be removed or demolished without obtaining prior written approval from the Contract Administrator.

#### 3.8.7 Tools and Equipment



- A. All tools and equipment used in the performance of the Work shall be used as intended by the manufacturer and in accordance with manufacturer operating manuals and industry practices, whichever is more stringent. The Contractor shall ensure that all tools and equipment used in the performance of the Work shall be of the size and quality suitable for safe and efficient performance of the Work. If the Contractor-provided tools and equipment do not meet these requirements, or if in the sole opinion of the Owner formed after considering relevant factors, the tools or equipment are inappropriate for performance of the Work, the Contractor agrees to remove the unacceptable tools and equipment and obtain tools and equipment the Owner considers suitable. Such replacement shall be entirely at the Contractor's expense, and no change to Contract Time will be allowed.
- B. The Contractor is responsible for furnishing the security of any and all tools and equipment required to perform the Work.

## SECTION 3.9: SAFETY & SECURITY

### 3.9.1 Safety and Protection Precautions

- A. The Contractor shall comply with all applicable federal, state and local laws, ordinances, all Owner procedures and policies, and orders of any public body having jurisdiction for the safety of persons or protection of property. The Contractor understands and agrees that violation of any provision of this clause is grounds for immediate termination of the Contract and the Contractor is responsible for all Owner damages associated with such termination.
- B. The Contractor shall ensure that Subcontractors and their personnel have all the necessary personal protective equipment and training needed to perform the Work safely.
- C. The Contractor understands and agrees that it is responsible for paying all costs associated with providing a safe work environment including, but not limited to, any costs associated with any Owner directed safety improvements. The Contractor further understands and agrees that it is solely responsible for the safety of personnel and property associated with the Work, and that any actions taken by the Owner or the Owner's Representatives to prevent harm to persons or damage to equipment does not, in any way, relieve the Contractor of this responsibility.
- D. The Contractor's Representative, or alternatively, the Contractor's Supervisor, shall be designated as the Contractor's individual responsible for the prevention of accidents.
- E. The Contractor shall notify the police and fire departments as to its Work Location in order to ensure prompt response in an emergency.

### 3.9.2 Emergency Events

- A. In the event that a system-wide emergency arises during the Term of this Contract for which the Owner requires assistance from the Contractor including, but not limited to, severe storms, large-scale fires, floods, and terrorist attacks, the Contractor acknowledges the importance of Owner infrastructure and agrees to support, with all its resources, skills and capabilities, and the maximum extent possible, all restoration efforts of the Owner. The Owner shall notify the Contractor when an emergency event occurs and the Contractor agrees to mobilize its full resources immediately. In the event conditions are such that an emergency event is likely in progress, but the Contractor has not been notified by the Owner, the Contractor shall make all efforts to contact the Owner to determine if and how it should respond. The Owner agrees to reimburse the Contractor for its actual costs incurred, plus overhead and profit, the total not exceeding twelve percent (12%), and any one-time expended cost incurred as a result of supporting the Owner during the emergency event.

### 3.9.3 Emergency Procedures

- A. In emergencies affecting the safety of persons, the Work or property at the Work Location or any other area adjacent thereto, the Contractor, without special instructions or authorization from the Owner, is obligated to act to its best ability, to prevent threatened damage, injury or loss to the Work, any persons, or property. The Contractor shall give the Owner prompt written notice describing the emergency, its cause, actions taken, injuries and casualties, property damage, other damages, and impact on continued performance under this Contract.

### 3.9.4 Storm Preparedness

- A. In the event of a Hurricane Warning, Tropical Storm Warning, or other large storm affecting the Work Location, the Contractor shall secure, or shall remove and store all equipment and materials at the Work Location including, but not limited to, cones, barricades, lights and signs. The Contractor shall begin taking such precautions as necessary to secure the Work Location upon official issuance of mandatory evacuation of the area of the Work Location and no later than twenty-four (24) hours prior to predicted arrival of tropical storm or hurricane force winds, or when notified by the Owner to do so. These activities are considered a regular part of the Work, regardless of the frequency they are required.

### 3.9.5 Weather Protection

- A. The Contractor shall provide proper facilities, take all necessary precautions and assume the entire cost for protecting the Work against weather conditions and for handling all storm, flood and ground water, sewage, or other seepage, that may be encountered during the performance of the Contract. The Contractor shall provide for such contingencies and for carrying on the Work in freezing weather by methods that meet with the approval of the Engineer. If the Contractor fails to provide such protection, or in the event of an emergency, the Owner may provide such protection at the Contractor's expense.

3.9.6 Project Security

- A. The Contractor shall provide, at its expense, on-site security personnel at any time the facility's perimeter is unsecured, including but not limited to, alarms disabled, fences or gates down, traffic flows that require gates to be opened repeatedly and/or for more than one hour of the work day. The Contractor shall schedule security personnel. Where existing lighting is disabled or otherwise impacted by the Work, the Contractor shall provide temporary lighting equal to or exceeding that which exists.

3.9.7 Protection of the Environment

- A. The Contractor shall immediately notify the Owner of any Hazardous Materials encountered during the Work and shall immediately cease work in the affected area until further direction is received from the Owner.
- B. The Contractor and its Subcontractors and Suppliers shall comply with all applicable laws, rules and regulations including, but not limited to, all Environmental Requirements.
- C. Asbestos, Lead, or Toxic Mold may be present at the Work Location. The Contractor shall notify the Engineer immediately upon discovery of asbestos, lead, toxic mold. The Contractor shall not disturb or remove known or discovered asbestos, lead, or toxic mold unless directed by the Engineer.
- D. Hazardous Materials:
  - 1. The Contractor shall bear full responsibility including, but not limited to, payment and liability for the transportation, use and disposal of any Hazardous Materials under the Contractor's control during the performance of the Work. Disposal of Hazardous Materials should only be disposed of at Owner approved facilities. The Contractor shall provide the Owner with appropriate documentation showing proper disposal of its Hazardous Materials.
  - 2. The Owner has identified and labeled equipment known to contain PCBs. The Owner will remove and transport any equipment so identified. The Contractor shall not remove or transport any equipment containing PCBs. The Contractor shall immediately notify the Owner of any questionable or unmarked equipment and the Owner will arrange for testing and identification.
- E. Toxic Substances Introduced by the Contractor:
  - 1. The Contractor shall notify the Engineer in writing of the type, quantity and disposal method of any toxic substance used during the performance of the Work. The Contractor shall be solely responsible for the use and disposal of any such toxic substances. The Contractor shall submit cleanup procedures to the Owner for review and written approval prior to the use of the toxic substance. In the event that a toxic substance escapes into the environment, the Contractor shall immediately notify the

Engineer in writing of the occurrence and the actions taken. In the event that the Contractor encounters toxic substances in the course of construction, the Contractor shall immediately notify the Engineer verbally, with a written notification to follow. The Engineer shall arrange for disposal by the Owner.

2. The Contractor will be solely responsible for all waste material including paints, lubricants, fuels, solvents, and other chemicals used in connection with the Work. The Contractor will provide proper containers for waste materials and comply with all applicable laws, rules and regulations in their disposal. The Contractor will dispose of all empty containers off-site as soon as possible. The Contractor will designate one area for transferring paints and solvents from large containers (55-gallon drums) into smaller containers for daily use.
- F. The Contractor understands and agrees that the Work Location may include wetlands or other environmentally sensitive areas. The Contractor shall not enter these areas during the performance of its Work, unless specifically authorized by the Engineer and appropriate state and federal permits have been obtained.
- G. The Contractor and/or Subcontractor's employees shall not endanger wildlife species or domestic animals of any kind.
- H. The Contractor shall immediately cease any activity that causes or results in a violation of the Owner's or the Contractor's environmental permits or federal, state and local laws and regulations. Such violation shall immediately be reported to the Engineer verbally, with written notification to follow. All additional costs due to the Contractor's noncompliance with the applicable environmental permits or Environmental Requirements shall be paid by the Contractor.

## SECTION 3.10: OTHER WORK AND OTHER PROPERTY

### 3.10.1 Encroachments on Rights or Property

- A. The Contractor shall be solely responsible for any encroachments on public property or on the rights or property of adjoining property owners to the Work Location, and shall hold the Owner harmless because of any encroachments that may result because of the Contractor's improper layout. In this regard, the Contractor shall, without extra cost to the Owner, remove any Work or portion of any Work that encroaches on the property other than that of the Work Location, or that is built beyond legal building or setback limits. The Contractor shall rebuild the affected Work or portion of Work at the proper location and in full compliance with the Contract Documents.

### 3.10.2 Interference With Existing Utilities

- A. The Contractor acknowledges and agrees that there is a possibility that existing the Owner or other utility facilities may cross and/or lie parallel to excavations in the area where Work will occur. Although the Owner may indicate recorded obstacles on the drawings, it

does not warrant that other subsurface obstacles do not exist. The Contractor shall be responsible for verifying the data furnished by the Owner and for fully investigating and locating additional obstructions including every type below, on or above the ground. The Contractor should regard these impediments as normal to construction. All costs for performing such work shall not be paid for separately, but shall be included in the Contractor's costs on the Bid Form.

- B. The Contractor shall comply with all requirements of the Underground Facility Damage Prevention and Safety Act, Chapter 556, *Florida Statutes*.
- C. In the event the Contractor encounters an unidentified utility during performance of the Work, the Contractor shall promptly cease Work in the affected area and shall immediately notify the Owner's Representative in writing. The Owner will investigate the area and propose remedial actions in accordance with the provisions stated herein in the Section 14, "Changes to Work."
- D. The Contractor shall work in cooperation with the Owner and representatives of existing utilities to plan and coordinate putting new Work into service so as not to interfere with the operation of the existing utilities. Such plans shall be adhered to unless deviations therefrom are expressly permitted in writing by the Contract Administrator.
- E. The Contractor shall at all times conduct the Work in a manner that interferes as little as possible with the existing utilities. Any cables exposed during construction, whether energized or not, must be handled and protected as if they are energized. The Contractor shall so conduct its operations and maintain the Work in such condition that adequate drainage shall be in effect at all times. The Contractor shall not obstruct existing gutters, ditches and other runoff facilities. When working in the vicinity of overhead lines, the Contractor shall request line rubber protection and pole holding services from the Owner of the overhead lines at least ten (10) calendar days in advance of performing the work.
- F. The Contractor shall be solely responsible for any damages, interferences, and interruptions of service caused to any utility's assets and services including water, sewer, electric, telephone, gas, cable, and other utility services, that result from the Contractor's failure to fulfill the above stated requirements.
- G. In the event the Contractor damages an existing utility, the Contractor shall immediately notify the property owner, the owner of the damaged utility and the Engineer. Should the damage cause an interruption of service, the Contractor shall be responsible for restoring service as soon as possible; however, the Contractor shall not make repairs, other than any required to restore safe conditions, without the approval of the property owner, or the owner of the damaged utility. The Contractor shall be responsible for coordinating any repair effort, and any associated costs should the utility owner or a licensed repair contractor be required to make the repair. The Owner reserves the right to deduct any unsettled claim amount from Contractor's invoices until such time as the claim is satisfactorily resolved.

### 3.10.3 Interference with Other Owner Work or Other Companies

- A. The Contractor shall perform the Work in a manner that minimizes the interference with other Owner work, or with work performed by other companies. The Contractor shall coordinate the Work with other persons and companies employed by the Owner. If a difference of opinion regarding scheduling or coordination of the work arises between the Contractor and another Owner contractor(s) performing work at the Work Location, the Owner may arbitrate the matter. In such cases where the Owner makes a decision regarding the scheduling or coordination of the work, the Contractor agrees to fully abide by the Owner's decision. Unless otherwise agreed in writing by the Owner, the Owner will not be responsible for additional costs.
- B. Any claims arising against the Contractor from damages to other companies' work, equipment, machinery, tools or other property shall be settled directly between the Contractor and the other companies involved. The Owner will not, in any way, be a party to arbitrating or mediating any such disputes, nor shall the Owner be responsible for any costs associated with such disputes.

#### 3.10.4 Interference with Railroads

- A. The Contractor shall not build across, into, over or under, either temporarily or permanently, any portion of a railway or railway right-of-way without first obtaining all required permits. If the Contractor's operations render any railroad unsafe, the Contractor shall immediately notify the Engineer, and the railroad owner and take appropriate actions and such temporary safeguards as required to protect life, limb, and property, and to maintain orderly traffic.
- B. The Contractor shall procure all railroad permits required for the Work beyond those procured by the Owner and the costs for such permits shall be included in the Bid Documents. All costs associated with railroad fees for railroad flagmen, watchouts, inspectors, supervisors, any additional training of Contractor's employees that is required by applicable laws, rules and regulations when performing Work in association with railways, any certifications required for successful completion of the Work and all other associated costs shall be included in the Bid Form.

#### 3.10.5 Interruption of Service

- A. The Contractor shall not operate any valves, nor otherwise interrupt water and/or sewer service, without first obtaining permission from the Owner. The Owner shall be present during any interruption of service.
- B. If the Contractor must shut down a main or portion of a main, thereby causing an interruption of water service, the Contractor shall provide the Owner with the following information, in writing, a minimum of five (5) business days in advance of any anticipated interruption of service:
  - 1. Date and time of outage.

2. Purpose of the outage.
  3. Map of the area to be affected by the outage.
  4. Letter stating all offices, businesses, and residents have been or will be notified by the Contractor at least four (4) business days in advance of the outage (unless the Owner chooses to issue such notification).
- C. The Contractor is not authorized to proceed with the requested Work without prior written notice from the Owner that such actions are approved.
  - D. In the event of a major emergency that endangers life or property, the Contractor may take immediate action before notifying the Owner. In all cases, however, the Owner shall be notified in writing at the earliest opportunity after addressing the emergency.

#### 3.10.6 Protection of Existing Facilities and Grounds

- A. The Contractor shall be responsible for protecting all the existing facilities including, but not limited to, buildings, lawns, landscaping, sprinkler systems, and pavements, both public and private, that are encountered during the performance of the Work. At all times, the Contractor shall cooperate with the owners of such facilities by arranging and performing the Work in and around such facilities in a manner that facilitates their preservation, relocation, and/or reconstruction. The Contractor shall be responsible for the full restoration or replacement if the Contractor damages such facilities during or resulting from performance of the Work.
- B. The Contractor shall verify the existing dimensions and clearances before laying out the Work. When the Work involves the laying of utility lines across landscaped areas and grassed areas, which may include, but is not limited to, irrigation systems, streets, sidewalks, and other paved areas, the Contractor shall protect and preserve all trees, shrubs, palms, landscaping, etc., and restore such areas and all paved areas to their original sound conditions using construction techniques and materials that are the same as existing including replacing plants and trees with those of similar size and age. In the case of planted areas, the Contractor shall maintain the restoration Work until positive growth has been acknowledged in writing by the Engineer.
- C. All costs for such restoration and replacement work shall be included in the associated lines on the Bid Form, and shall not be paid for separately.
- D. The Contractor shall not (except upon written consent from the property owner and Contract Administrator) enter or occupy with workers, tools, equipment or vehicles any land outside the easements, right-of-ways, or the Owner's property.

#### 3.10.7 Temporary Closure of Roadways

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without first obtaining permits. If any street or private way is rendered unsafe by the

Contractor's operations, the Contractor shall make such repairs or provide such temporary ways and guards necessary for the protection and safety of persons on the Work and the public and for the orderly maintenance of traffic. All costs associated with temporary closure of roadways shall be included in the Bid price.

- B. The Contractor shall notify the police and fire departments in writing if it will be necessary to close a street. The Contractor shall copy the Owner on all correspondence relating to street closure. The Contractor shall notify the police and fire departments prior to closure of the street. The Contractor shall be responsible for maintaining proper coordination with the proper authorities.
- C. Temporary closure of business entrances must be approved in writing by and coordinated with the Owner.
- D. For the purposes of this Contract, the Contractor shall refer to the DIVISION 6: TECHNICAL SPECIFICATIONS.

## SECTION 3.11: DRAWINGS

### 3.11.1 Shop Drawings

- A. The Contractor shall submit all Shop Drawings according to the Schedule of Submittals approved by the Engineer and the DIVISION 6: TECHNICAL SPECIFICATIONS.
- B. Shop drawings shall establish the actual quantities, dimensions, materials and specified performance and design details of all manufactured or fabricated items, services and equipment that Contractor proposes to provide for the Work; indicate proper relation to adjoining Work; amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure; and incorporate minor changes of design or construction to suit actual conditions.
- C. Shop drawings shall be complete in every detail, properly identified with the Contract name, Contract and subsection number for identification of each item, and state the qualifications, departures or deviations from the Contract, if any. Shop drawings for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. Each drawing shall have a clear space above the title block in the lower right-hand corner for the approval stamps of the Contractor and the Engineer.
- D. In checking the Shop Drawings, the Contractor shall:
  - 1. Verify all dimensions and field conditions, and shall check and coordinate the Shop Drawings of any section or trade with the requirements of all other sections or trades whose Work is related thereto, as required for proper and complete installation of the Work.



2. Verify all rough-in and connections for utilities shall conform to approved equipment Shop Drawings
  3. Review and coordinate each Shop Drawing with other Shop Drawings and the Contract Documents
  4. Determine and verify all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety programs.
- E. The Engineer will review the Shop Drawings and will return them to the Contractor stamped to indicate the action taken. For planning purposes, the Contractor shall allow a minimum of two (2) weeks for review of each Shop Drawing. The stamp will indicate that the Shop Drawing is "No Exception Taken", "Make Corrections Noted", "Revise and Resubmit" or "Rejected". Only those Shop Drawings stamped "Revise and Resubmit" or "Rejected" shall be resubmitted for subsequent review. Resubmittals shall be in the same form and number of copies as original submittals, with notation indicating a revised submittal. The Shop Drawings stamped "No Exception Taken" or "Make Corrections Noted" will be returned to the Contractor, who will be responsible for obtaining prints thereof and distributing them to the field and Subcontractors.
- F. At the same time the Engineer returns a reviewed submittal to the Contractor it will forward two copies of each item stamped "No Exception Taken" or "Make Corrections Noted" together with any conditions of approval, to for field and office use. The Engineer may revoke approval of Shop Drawings, should field conditions so dictate.

## SECTION 3.12: INSPECTIONS, QUALITY & REPORTING

### 3.12.1 Contractor's Daily Reports

- A. The Contractor shall complete and submit daily reports for each calendar day of the Work, starting with the date of the Notice to Proceed, and said reports shall be submitted to the Owner's Representative by noon of the following workday. The Contractor's failure to submit the daily reports as specified herein will be grounds for withholding payments.
- B. Upon review of the Contractor's Daily Reports, any discrepancies in the information noted by the Owner's Representative will be provided to the Contractor. A revised Daily Report will be resubmitted within one (1) business day.

### 3.12.2 Reporting

- A. The Contractor shall provide the reports as defined in the Contract Documents. The Contractor shall refer to DIVISION 6: TECHNICAL SPECIFICATIONS.
- B. Where the reporting frequency is daily, reports shall be submitted by noon of the following workday. Where the reporting frequency is weekly, reports are due by Monday at noon, covering the prior workweek. Where Monday is a Holiday, the reports are due

at noon on the next workday. Where reports are due monthly, reports are due by noon on the first business day of each month. Sample forms for reports may be included in the Contract Documents. Where they are included, they are to be used. Where they are not included, the Contractor shall provide a sample of its proposed report format for each report to the Engineer at least one (1) week prior to its initial due date. The Engineer will review and either approve or reject the use of the report. Where the proposed report is rejected, the Contractor shall resubmit revised report formats, until the Engineer approves format. The Reporting Cycle shall begin on the Notice to Proceed date or the date of the purchase order, if used.

- C. Where the Contract calls for reports to be submitted by the Contractor, such reports shall be in both paper and electronic format, with the electronic version submitted electronically via email to the Engineer.

### 3.12.3 Quality Control and Quality Assurance

- A. The Contractor shall provide Quality Control to ensure the Work is performed in accordance with the Contract and in adherence with the Standard of Care. Quality Control shall be appropriate for the nature of the Work, and shall be conducted in a manner consistent with sound quality management and industrial engineering principles. The Contractor shall have only personnel trained in Quality Control techniques and experienced with the nature of the Work perform the Quality Control function.
- B. The Owner may perform Quality Assurance activities. Such activities, whether performed or not, do not in any way limit or reduce the Contractor's requirements. The Owner may become aware of quality related problems during its performance of Quality Assurance, but has no obligation to notify the Contractor of its findings. The Contractor shall provide access to all areas of Work, including the Contractor's facilities, for the Owner's Quality Assurance personnel and the Owner's Representatives. The Owner will conduct Quality Assurance activities so as not to excessively interfere with the Work, however, where the Owner Quality Assurance personnel request specific actions of the Contractor, the Contractor shall comply with the request and agrees that such compliance is included as part of its Contract Price.
- C. The Contractor shall refer to DIVISION 6: TECHNICAL SPECIFICATIONS.

### 3.12.4 Inspections and Testing

- A. The Owner, or its designated representatives, will perform inspections at the Contractor facilities during normal business hours and in a manner that minimizes disruption to the normal day-to-day work activities of the Contractor. Contractor shall provide safe and proper facilities for inspection access and observation of the Work and also for any inspection or testing by others.
- B. If the Contractor has covered or concealed any Work from inspection in any way that the Engineer has not specifically requested prior to the Owner's Representative's inspection, or if the Engineer considers it necessary or advisable that covered Work be inspected or

tested by others, the Contractor, at the Engineer's request, shall uncover, expose or otherwise make available the portion of the Work in question for observation, inspection or testing as the Engineer may require. The Contractor shall furnish all necessary labor, material and equipment to make such Work available.

- C. The Contractor shall bear all expenses of uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including, but not limited to, compensation for additional professional services required by the Owner, and no change in Contract Time will be considered as a result of the foregoing.
- D. The Owner may, at its sole discretion, grant the Contractor an extension of the Contract Time directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.
- E. All materials and equipment used in the construction of the Contract shall be subject to adequate inspection and testing in accordance with accepted standards. The Contractor shall select the laboratory or inspection agency for making all tests required by the specifications, and shall pay for this laboratory service direct, as a part of this Contract.
- G. The Contractor shall pay for all required testing of materials and equipment. Two (2) copies of each test showing certification of each test shall be furnished to the Engineer immediately after such test has been made and with the exception of concrete, prior to delivery of the materials or equipment tested to the Work Location. The Owner will not accept the materials or equipment until tests have been approved.
- H. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended. Test requirements for all materials are set out in the detailed specifications for that particular material. All materials and equipment prior to being incorporated in the Work, and required by the Engineer to be tested, shall be tested for conformance with contractual requirements. Standard items of a uniform nature may be accepted on the manufacturer's certification. Where specific performance and/or quality is referred to, it is the Contractor's responsibility to have the necessary tests performed by qualified persons to show that the contractual requirements are being met except those tests named in the Contract Documents to be performed by the Owner. Certified test results shall be submitted promptly in quadruplicate to the Engineer for review. All tests shall be performed in accordance with referenced standards. Where no reference is made, tests shall be performed in accordance with the methods prescribed by the American Society for Testing and Materials or such other organization as would be applicable.
- I. The Contractor shall pay for any retests resulting from its failure to provide Work that passes required tests.
- J. The Engineer, or the Owner appointed Inspectors may inspect any and all materials and Work. Such inspection may extend to any or all parts of the Work and to the preparation and manufacture of the materials to be used. The Inspectors shall not be authorized to

alter, revoke, enlarge or relax the provisions of the Contract, nor will they be authorized to approve or accept any portion of the completed Work, nor to issue instructions contrary to the Contract. The Inspector shall inform the Engineer of the progress of the Work and the manner in which it is being done, and notify the Contractor of any infringement upon the Contract Documents. The Inspectors will have the authority to reject defective materials or to suspend any Work that is being improperly done subject to the final decision of the Engineer.

### 3.12.5 Performance Evaluation

A. The Owner may, upon completion of the Work or at any time during the Work, issue to the Contractor a written performance evaluation of the Contractor's performance of Work under this Contract. The evaluation will be based upon the Owner's and the Engineer's reports, inspections, and first-hand experience in dealing with the Contractor and the Contractor's representatives. The performance evaluation will indicate whether the Contractor's performance has been deemed "Satisfactory," "Unsatisfactory" or "Top Performance" with regard to the following criteria:

1. Timeliness;
2. Customer Service to Owner;
3. Care of Owner's Customers;
4. Financial Performance;
5. Quality of Workmanship;
6. Quality of Materials & Equipment;
7. Safety;
8. Environmental;
9. Compliance with MBE/WBE Requirements; and
10. Project Administration.

## SECTION 3.13: OWNER-FURNISHED ITEMS

### 3.13.1 Conditions of Provisioning

A. The Contractor understands and agrees that it shall be solely responsible for providing everything necessary to perform the Work and to be in full compliance with the Contract

Documents, except for those items specifically listed herein as being provided by the Owner.

- B. Any use of Owner-furnished items on non-Owner work is a breach of the Contract and a violation of the law. All Owner-furnished items are the property of the Owner when issued, stored by Contractor, and used in performance of the Work. The Contractor agrees that it shall use all Owner-furnished items in a manner consistent with industry practice, codes, laws, considering the condition of the Owner-furnished item, the skills of the individuals using the Owner furnished item, and all environmental conditions. The Contractor understands and agrees that where the Owner and the Contractor shall share Owner-furnished items, Owner usage shall always have priority over Contractor usage, and the Contract Administrator shall have sole authority to resolve any usage dispute and such resolution shall not result in any claim by Contractor.
- C. The Contractor agrees to return to the Owner, and to the location as established by the Engineer, any unused or salvageable items prior to final payment. The Contractor agrees that the Owner has the right to audit and investigate at any time how the Contractor is using Owner-furnished items. The Owner will bill the Contractor for unaccountable Owner-furnished material at the current Owner cost.

#### 3.13.2 Access to Work Locations

- A. The Owner will provide, as indicated in the Contract Documents, and no later than the date when needed by the Contractor, access to the Work Location, including rights-of-way or access thereto, and such other lands that are designated for the Contractor's use. The Owner will secure easements for permanent structures or permanent changes in existing facilities, unless otherwise specified in the Contract Documents.

#### 3.13.3 Contract Documents

- A. After Contract Award, the Owner will furnish a maximum of one (1) complete set of the Contract Documents, or portions requested thereof, upon request by the Contractor. Additional copies will be supplied at cost to the Contractor.

#### 3.13.4 Site Conditions

- A. The Owner will provide to Contractor test data results from field tests. Such data has been determined by the Owner to be sufficient to describe the conditions to be expected during the performance of the Work. The Contractor shall not be entitled to any claim for additional costs associated with any ground related Work, unless the actual conditions found substantially differ from those described by the test data.
- B. The Contractor is responsible for verifying Site conditions and obtaining additional data as the Contractor deems necessary. The Contractor will be responsible for all costs associated with the gathering of additional Site data.

### SECTION 3.14: CHANGES TO WORK

3.14.1 Unforeseen Conditions

- A. The Contractor understands and agrees that it is its responsibility to conduct due diligence prior to the start of Work. Such due diligence includes, but is not limited to, verifying all Work conditions, measurements, dimensions and latent and patent obstructions, the accuracy of drawings, test results, inspections and other informational materials provided in the Contract Documents, and any other causes for existing or potential changes to the Work prior to initiating the Work. In the event that the Work must be changed due to the Contractor's failure to fulfill the above requirements, the Contractor understands and agrees that it will be responsible for all costs associated with the changed condition.
- B. In the event, however, that the Contractor exercises the requisite due diligence and a change to the Work becomes necessary resulting from conditions that are clearly unforeseen and that could not have been discovered, the costs for adjusting the Work in response to such unforeseen conditions shall be addressed as stated herein in Article 3.14.2 below titled "Changes in the Work and Change Orders."

3.14.2 Changes in the Work and Change Orders

- A. The Engineer may issue to the Contractor a written Field Order to authorize minor changes to the Work having no impact on Contract Price or Contract Time. If the Contractor anticipates that the Field Order work will impact the Contract Price or Contract Time the Contractor should immediately notify the Engineer.
- B. In the event of an emergency endangering life or property where it is appropriate for the Contractor to take action, the Contractor shall undertake such actions to preserve life and property. The Owner and the Contractor will determine after emergency is concluded, the extent of out-of-scope work performed by the Contractor, and the Owner will issue a Change Order or amend the Contract for such work, if any and as necessary.
- C. Anything to the contrary notwithstanding, in the event that the Owner determines that a change must proceed immediately or if the Owner rejects all or a portion of the Contractor's estimated effect of a change, then the Owner may direct, and the Contractor shall commence immediately and perform until completion, the necessary services to implement the change. The Owner will issue such direction in the form of a written Work Change Directive. The Contractor shall be compensated for such change in the work, notwithstanding any objections of the Contractor, which objections shall be preserved and not waived by the Contractor's commencement or performance of the Work as directed by the Owner.
- D. To request or claim any change in the Work including, but not limited to change in scope, quantities, pricing, or schedules, the Contractor shall submit a letter to the Engineer stating such request or claim. The Engineer shall review and submit a written recommendation to the Owner. The Owner shall have the right to approve or disapprove any request or claim for change as it deems necessary and in its best interests consistent with the other Contract requirements. Whether requested by the Contractor, claimed by

the Contractor, or contemplated by the Owner, no change shall be authorized unless made on an Owner Change Order signed by the Contract Administrator or through a formal written amendment to this Contract.

- E. All requests for changes filed by the Contractor shall be in writing delivered to the Owner's Representative within ten (10) business days of when the event that prompted the claim was discovered or should have been discovered. The Contractor's failure to timely submit a written claim will constitute a waiver of the right to pursue a claim. Upon receipt of the Contractor's claim notification, Owner's Representative will provide written direction as to the procedures that will be used to address the request. The Contractor's request shall be sufficiently detailed including itemized costs, condition and work descriptions and other information necessary to evaluate the merits of the claim. A cost breakdown showing all labor, material and equipment shall be provided. The Owner's Representative may reject requests providing insufficient supporting information. Any change in the Contract resulting from the request will be incorporated into the Contract via a Change Order or Purchase Order. Where the Engineer and the Contractor are unable to reach a mutually acceptable resolution of request, the Owner's determination will be final.
- F. Where necessary, the Owner will determine the value of work covered by a change order using one of the following methods:
  - 1. Where the work is covered by established unit prices contained in the contract, the unit price, if the Owner agrees that this is a fair and reasonable price; otherwise, a negotiated price will be applied to the quantity of work at the discretion of the Owner,
  - 2. By mutual acceptance of lump sum price,
  - 3. By actual cost and a mutually acceptable fixed amount for overhead and profit, or
  - 4. Where Bid Price was based on estimated quantities, prior to making final payment, the Owner will determine actual quantities using sampling, surveying and other industry recognized means and prepare a Change Order adjusting the price to reflect actual volumes.
- G. The Contractor shall immediately notify the Owner's Representative in writing of any unauthorized change in the scope of the Work or significant change in the quantities of the Work that may increase the Contract Price, require an extension of Work schedule, or negatively impact permitting or other regulatory requirements.
- H. The Contractor shall submit requests or claims for a Work schedule adjustment in writing and delivered to the Engineer within five (5) business days following the discovery of the event that prompted the claim or when the event should have been discovered. Where accepted by the Owner, changes to the Approved Schedule will only adjust for critical path impacts. Failure to include the necessary critical path analysis with request shall be grounds for rejecting the claim. The path of critical events mentioned herein means the series of interdependent Work events that must be sequentially performed and that require a longer total time to perform than any other such series. Upon receipt of the

Contractor's request for a change in the Work schedule, the Owner's Representative will provide any additional directions in writing detailing the procedures that will be used to resolve the request, including provision of time impact or manpower and equipment loading schedules. Where the Owner and the Contractor are unable to reach a mutually acceptable resolution of request, the Owner will make a commercially reasonable determination, made in accordance with the Owner's established policies and procedures, which shall be final.

- I. All Work defined on Field Orders, Work Change Directives and Change Orders shall be subject to the conditions of the Contract, unless specifically noted on the Field Order Form, Work Change Directive Form, or Change Order.

#### 3.14.3 Delay

- A. Damage, loss, expense or delay incurred or experienced by the Contractor in the prosecution of the Work by reason of unforeseen circumstances, unanticipated difficulties and obstructions, bad weather, or other mischances that are generally considered to be a part of the usual hazards associated with Work, shall be borne entirely by the Contractor and shall not be the subject of any claim for additional compensation or change in Approved Schedule.
- B. The Contractor agrees that its sole remedy for any claims, damages or losses related to any delay, disruption or hindrance alleged to be caused by the Owner or any of the Owner's agents or other contractors, shall be an extension of the Contract completion date. As such, the Contractor shall not recover any cost associated with extended home/field office overhead, idle labor/equipment/materials, subcontractors' claims or any other miscellaneous costs.
- C. Any demand for equitable time adjustment must be served in writing to the Owner within five (5) calendar days of the event giving rise to any delay, disruption or hindrance. Any request for an equitable time adjustment shall be accompanied by a logical time impact analysis, demonstrating the nature and magnitude of the event to the critical path. Any request that is not clearly shown to be an impact to the project's critical path will be denied.
- D. Failure to strictly comply with these requirements shall be deemed a waiver of any right to seek equitable adjustment.

#### 3.14.4 Notification of Surety

- A. The Contractor shall notify its surety of any changes affecting the general scope of the Work or altering the Contract Price.

#### 3.14.5 Contingency Work

- A. The Owner will issue a written Change Order to incorporate cost or schedule changes into the Contract. Issuance of a Change Order is solely at the discretion of the Owner. The



Change Order shall be used for increases or decreases in the Contract Price, within the contingency amount set forth in the Contract Price, or to make changes in schedule for performance of the Work.

- B. The Contractor should not expect that any Change Orders for contingency work will be issued. Owner shall have no obligation to pay for contingency work unless the same is performed pursuant to a written Change Order form signed before the contingency work is commenced.
- C. The Contractor and the Engineer shall mutually agree to the pricing of a Change Order for contingency work. Any negotiated increase or decrease in the Contract Price shall be based on the Contractor's costs for labor, materials and supplies directly applicable to the increase or decrease plus ten percent (10%) thereof for Contractor's supervision, overhead, bonds and profit. For any negotiated increase or decrease, the Contractor will provide a complete detailed breakdown for all labor, material, and equipment, etc. associated with the change. A lump sum figure submitted with no breakdown will be returned to the Contractor without review.
- D. Cost Reimbursable (Time and Materials) Method:
  - 1. The Owner may, at its sole discretion, implement cost reimbursable procedures in order to limit the costs for performance of contingency work. Also, whenever the Contractor and the Owner are unable to agree on costs for an increase in the Work, the Owner or Engineer shall order the Contractor to proceed with the Work on a cost reimbursable (time and material) basis. The Owner will pay the Contractor for the contingency work in the manner hereinafter described, and the compensation thus provided shall constitute full payment for said work. The Owner shall issue the Change Order for the Contractor to perform the specific contingency work with payment determined as follows:
    - a. For materials purchased by the Contractor and used in the work, the Contractor shall be paid the actual cost of such materials, including sales taxes if required, and freight and delivery charges as shown by original receipted bills. A mark-up amount equal to ten percent (10%) of the sum thereof shall be added to this cost. The Owner reserves the right to select and approve, or to reject the materials to be used and the sources of supply of any materials furnished by the Contractor.
    - b. The Contractor will be paid the cost of wages for all labor that is engaged in the Work, plus the actual cost chargeable to the Work for workers' compensation insurance, social security taxes, unemployment compensation insurance and such additional amounts as are paid by the Contractor. A total mark-up shall be added equal to ten percent (10%) of wages and other cost listed above. In evidence of the costs of labor the Contractor shall provide a certified statement of wages actually paid, together with copies of supporting payrolls. Wage rates used in determining the amount of the payment will be the actual wage rates paid by the Contractor for Work under this Contract, except that no rate used shall exceed the rate of comparable labor currently employed on the project.

- c. Payment for the services of foremen in direct charge of the specific operation will be made. Payment for the service of superintendents, timekeepers or other overhead personnel will not be made nor will payment for the services of watchmen be made unless required specifically by the contingency Work. The actual function performed by an employee rather than its payroll title will be the criterion used in determining the eligibility of an employee's services for payment under this provision.
- d. The types and amounts of equipment and machinery used by the Contractor in carrying out its work under the contingency shall be made in keeping with normal practice for work of similar nature. Owner may, at its discretion, limit by specific instruction the types and amounts of equipment and machinery to be used. For all equipment and machinery used in the contingency work, the Owner will pay eighty percent (80%) of the rental value as set forth in the Blue Book value or actual cost, whichever is less, to which no mark-up percentages will be added.
- e. In computing the hourly rental of such equipment, less than thirty (30) minutes shall be considered 1/2 hour except when the minimum rental time to be paid is one hour. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment to be paid for shall be the time the equipment is in operation on the contingency work being performed. The Contractor shall be reimbursed for the time required to move the equipment to the Work, and return it to its original location, only if the Contractor is charged this cost by the renting agency. Excess rental time of equipment due to inefficient work practices will not be reimbursed.
- f. No payment will be allowed for the use of small tools and minor items of equipment, which, as used herein, are defined as individual tools or pieces of equipment having a replacement value of \$500.00 or less.
- g. The Contractor and the Engineer shall compare records of the Work performed on a Cost Reimbursable basis at the end of each day. These records shall be prepared by the Contractor and shall be signed by both the Owner and the Contractor's Representative. A copy of these records shall be submitted to the Owner with the invoice for the work.
- h. Payment for cost reimbursable contingency work will be included in monthly progress payments.
- i. The Contractor's Subcontractors will be allowed a ten percent (10%) mark-up on Work performed by their own forces. The Contractor will be allowed a five percent (5%) mark-up on the Subcontractor's costs (i.e. labor, materials and equipment) only, no mark-up on the Subcontractor's profit.

#### 3.14.6 Suspension of Work

- A. The Owner may suspend the performance of the Work rendered by providing the Contractor with five (5) business days written notice of such suspension. Schedules and compensation for performance of the Work shall be amended by mutual agreement to reflect such suspension. In the event of suspension of Work, the Contractor shall resume the full performance of the Work when the Owner gives written direction to do so. Suspension of Work caused by the Contractor's sole negligence or failure to perform shall not affect the Contractor's compensation as outlined in the Contract Documents.

3.14.7 Unauthorized Work

- A. The Owner will consider any Work done without lines and grades given, Work done beyond the lines and grades shown on the Contract or as given, or any extra Work done without written authority, as unauthorized Work and will not pay the Contractor for such Work. If so ordered by the Contract Administrator, the Contractor shall remove such Work and properly replace it at the Contractor's own expense.

3.14.8 Payment of Overtime

- A. Any Overtime required for the Contractor to complete the Work within the Contract Time shall be at the sole cost and expense of the Contractor.
- B. If the Owner requires the Contractor to perform Overtime Work in order to complete the Work prior to the Contract Time, the Contractor shall bill the Owner for the Overtime such that only the actual costs incurred by the Contractor relating to the payment of Overtime premiums, in accordance with its labor policies and applicable laws. Such actual costs include Overtime wage premium, and additional taxes and insurance directly associated with the Overtime wage premium. The Contractor agrees that it will not charge for personnel paid a salary, or other form of compensation such that the Contractor incurs no direct costs as a result of the Overtime. The Contractor shall total the direct Overtime charges, and add the agreed upon overhead rate, but in no case, shall such overhead rate exceed ten percent (10%) of the total overtime costs.
- C. Overtime may only be charged to the Owner if the Contractor was directed in writing by the Contract Administrator to incur the Overtime. Such authorization for Overtime shall be accompanied by a Change Order.

3.14.9 Scheduling of Overtime (Contractor Initiated Overtime)

- A. Whenever the Contractor schedules Work beyond ten (10) hours per day, beyond fifty (50) hours per week, or on Saturdays, Sundays, or Owner Holidays, then the Contractor shall arrange, in advance, for the Engineer to inspect the Work performed during Overtime. The Contractor shall not perform Overtime Work or after-hours Work without an Owner's Representative at the Work Location or available to perform the inspections, as directed by the Contract Administrator. Except where the Owner has requested the Contractor schedule Overtime to perform additional Work, the Contractor shall reimburse the Owner for any additional costs associated with the Owner's Representatives' Overtime pay.

## SECTION 3.15: LABOR

### 3.15.1 E-Verify Requirements.

Effective January 1, 2021, public and private employers, contractors, and subcontractors must require registration with, and use of the E-Verify system in order to verify the work authorization status of all newly hired employees. Contractor acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of:

- (1) All persons employed by Contractor to perform employment duties within the State of Florida during the term of the Agreement; and
- (2) All persons (including subcontractors/subvendors/subconsultants) assigned by Contractor to perform work pursuant to this Contract with the Owner. Contractor acknowledges and agrees that the use of the U.S. Department of Homeland Security's E-Verify System during the term of this Agreement is a condition of the Contract with the Owner.

By entering this Contract with the Owner, Contractor becomes obligated to comply with the provisions of Section 448.095, Florida Statutes, "Employment Eligibility." This includes, but is not limited to, use of the E-Verify System to verify the work authorization status of all newly hired employees, and requiring all subcontractors to provide an affidavit to Contractor attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Contractor agrees to maintain a copy of such affidavit for the duration of this Agreement. Failure to comply with this section will result in the termination of this Contract as provided in Section 448.095, Florida Statutes, and Contractor may not be awarded a public contract for at least one (1) year after the date on which the Contract was terminated. Contractor will also be liable for any additional costs to Owner incurred as a result of the termination of this Contract in accordance with this section.

### 3.15.2 DBE, MBE and/or WBE Requirements

- A. Contractor represents that it will comply with all applicable provisions regarding DBE, MBE and/or WBE enterprises requirements.

### 3.15.3 Contractor's Labor Relations

- A. The Contractor shall negotiate and resolve any disputes between the Contractor and its employees, or anyone representing its employees. The Contractor shall immediately notify the Owner of any actual or potential labor dispute that may affect the Work and shall inform the Owner of all actions it is taking to resolve the dispute.

### 3.15.4 Minimum Qualifications of Contractor Personnel

- A. All Contractor personnel shall be at a minimum qualified for the tasks they are assigned. All Contractor personnel shall act in a professional manner, with due sensitivity to other

persons at the Work Location. If the Owner, at its sole reasonable discretion, determines that a Contractor's person is unqualified, unfit, or otherwise unsuitable for the tasks assigned, the Contractor shall immediately stop the person from performing the tasks, and replace the person with a qualified individual. The Contractor shall pay all costs associated with replacing the unqualified person including, but not limited to, termination, recruiting, training, and certification costs.

- B. The Contractor personnel assigned supervisory roles, and those with increased authority shall be held to strict scrutiny of their qualifications and suitability for their positions. In addition to the other provisions of this clause, the Contractor shall provide written documentation as to experience, education, licenses, certifications, professional affiliations, and other qualifications of the individual, within one (1) day of request from the Engineer. Any changes to such personnel after approval shall require the written permission of the Engineer.

### 3.15.5 Nondiscrimination

- A. Contractor represents that it will comply with all applicable equal employment laws, rules, and regulations..
- B. The Contractor represents that it has adopted and will maintain a policy of nondiscrimination against employees or applicants for employment. The Contractor covenants and agrees that no employee or applicant for employment will be discriminated against during the course of employment or in the application process with respect to hiring, tenure, terms, conditions, or privileges of employment, because of race, color, religion, sex, gender, age, disability, national origin, marital status, political affiliation, familial status, pregnancy, gender or sexual orientation, or veteran or service member status throughout the Term of this Contract. The Contractor agrees that on written request, it will allow the Owner reasonable access to the Contractor's records of employment, employment advertisement, application forms and other pertinent data and records for the purpose of investigation to ascertain compliance with the nondiscrimination provisions of this Contract; provided however, the Contractor shall not be required to produce, for inspection, records covering periods of time more than one (1) year from the effective date of this Contract.
- C. The Contractor shall comply with the following executive orders, acts, and all rules and regulations implementing said orders or acts, which are by this reference incorporated herein as if set out in their entirety:
  - 1. The provisions of Presidential Order 11246, as amended, and the portions of Executive Orders 11701 and 11758 as applicable to Equal Employment Opportunity;
  - 2. The provisions of section 503 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA); and
  - 3. The provisions of the Employment and Training of Veterans Act, 38 U.S.C. 4212 (formerly 2012).

D. Discriminatory Vendor List. Contractor hereby acknowledges its continuous duty to disclose to the Owner if Contractor or any of its affiliates, as defined by Section 287.134(1)(a), Florida Statutes, has been placed on the Discriminatory Vendor List. Pursuant to Section 287.134(2)(a), Florida Statutes: "An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity."

E. The Contractor agrees that if any of the Work of this Contract will be performed by a Subcontractor, then the provisions of this subsection shall be incorporated into and become a part of the subcontract.

#### 3.15.6 Show-Up Pay

A. In the event that inclement weather prevents the Contractor from performing Work, the Contractor may be obligated to pay its crew a show-up pay. The Contractor shall be solely responsible for providing this pay.

### SECTION 3.16: RIGHTS, REMEDIES, AND DISPUTES

#### 3.16.1 Intellectual Property

A. The Contractor grants to the Owner an irrevocable, perpetual, royalty free and fully paid-up right to use (and such right includes, without limitation, a right to copy, modify and create derivative works from the subject matter of the grant of the right to sublicense all, or any portion of, the foregoing rights to an affiliate or a third party service provider) the Contractor's intellectual property (including, without limitation, all trade secrets, patents, copyright and know-how) that is contained or embedded in, required for the use of, that was used in the production of or is required for the reproduction, modification, maintenance, servicing, improvement or continued operation of any applicable unit of Work.

B. If the Work contains, has embedded in, requires for the use of any third party intellectual property, or if the third party intellectual property is required for the reproduction, modification, maintenance, servicing, improvement or continued operation of the Work, the Contractor shall secure for the Owner an irrevocable, perpetual, royalty free and fully paid-up right to use all third party intellectual property. The Contractor shall secure such right at its expense and prior to incorporating any third party intellectual property (including, without limitation, all trade secrets, patents, copyright and know-how) into any Work, including, without limitation, all drawings or data provided under the Contract, and such right must include, without limitation, a right to copy, modify and create

derivative works from the subject matter of the grant of the right and a right to sublicense all or any portion of the foregoing rights to an affiliate or a third party service provider.

- C. Should the Owner, or any third party obtaining such work product through the Owner, use the Work or any part thereof for any purpose other than that which is specified herein, it shall be at the Owner's sole risk.
- D. The Contractor will, at its expense, defend all claims, actions or proceedings against the Owner based on any allegation that the Work, or any part of the Work, constitutes an infringement of any patent or any other intellectual property right, and will pay to the Owner all costs, damages, charges, and expenses occasioned to the Owner by reason thereof. The Owner will give the Contractor written notice of any such claim, action or proceeding and, at the request and expense of the Contractor, the Owner will provide the Contractor with available information, assistance and authority for the defense.
- E. If, in any action or proceeding, the Work, or any part thereof, is held to constitute an infringement, the Contractor will forthwith either secure for Owner the right to continue using the Work or will, at the Contractor's expense, replace the infringing items with noninfringing Work or make modifications as necessary so that the Work no longer infringes.
- F. The Contractor will obtain and pay for all patent and other intellectual property royalties and license fees required in respect of the Work.

#### 3.16.2 Offsets

- A. If the Owner reasonably believes the Contractor is in violation of any requirement of the Contract, the Owner may withhold payments that may be due the Contractor, and may offset existing balances with any Owner incurred costs against funds due the Contractor under this and any other Contractor Contract with the Owner, as a result of the violation, or other damages as allowed by the Contract Documents and applicable law.

#### 3.16.3 Proprietary Information

- A. The Contractor shall not copy, reproduce, or disclose to third parties, except in connection with the Work, any information that the Owner furnishes to the Contractor. The Contractor shall insert in any subcontract a restriction on the use of all information furnished by the Owner. The Contractor shall not use this information on another project. All information furnished by the Owner will be returned to the Owner upon completion of the Work. The Contractor may retain a copy of such information solely for its own project records.

#### 3.16.4 Removal of Work

- A. The Contractor shall not sell, assign, mortgage, hypothecate or remove Work that has been delivered to or installed at the Work Location without the Owner's approval.

3.16.5 Right to Audit and Financial Reporting

- A. Upon the Owner's reasonable requests, the Contractor agrees to allow the Owner to audit its financial and operating records for the purpose of determining invoice accuracy, or otherwise assessing compliance with the Contract Documents. The Contractor agrees to allow Owner personnel, their qualified representative, and representatives to access the records at Contractor's office, with three (3) business days written notice, for a reasonable period, not less than five (5) business days, in a workspace suitable for the audit provided by the Contractor. All audit work will be done on the Contractor's premises, and no Contractor documentation will be removed from the Contractor's offices. The Contractor agrees to have knowledgeable personnel available to answer questions for the auditors during the time they are at the Contractor's offices and for a period of two (2) weeks thereafter. The Contractor shall provide to the Owner audited financial statements for the most recent fiscal year upon the Owner's request, not later than five (5) business days after receipt of written request.

3.16.6 Title to Materials Found

- A. The Owner shall retain the title to water, mineral matter, timber and any other materials that the Contractor, or its Subcontractors, encounter during the excavation or other operations of the Work. The Contractor shall use or dispose of this material in accordance with the Contract or written instructions from the Engineer. Any materials found in the excavation, or other operations of the Contractor, that are of archaeological or historical value shall be left in place. The Contractor shall immediately notify the Owner of the find and shall take no further action until directed by the Owner.

3.16.7 Owner's Rights for Contractor Breach

- A. In the event that Contractor causes delay to Approved Schedule, performs its Work in a manner that fails to meet the Standard of Care, commits a material breach of this Agreement, or otherwise damages the Owner at law or in equity, the Owner is entitled to all remedies and damages available at law, including, but not limited to, liquidated damages, actual damages, consequential damages, attorneys' fees, and costs.

3.16.8 Limited Waiver of Consequential Damages

- A. The Parties expressly agree that no Party to this Agreement shall be liable to any other Party or Parties to this Agreement for any special, consequential or exemplary damages of any kind whatsoever, whether arising in contract, warranty, tort (including but not limited to negligence), strict liability, or otherwise, including without limitation losses of use, profits, business reputation and financing, subject to the following exceptions: (i) willful misconduct, recklessness, or fraud by the Contractor or any entity for which it is legally responsible; (ii) the Contractor's third-party indemnity obligations under this Agreement or arising by operation of law, including claims for bodily injury, personal injury, or death; (iii) abandonment; (iv) Contractor's liability for liquidated damages; and (v) liability that is recoverable from Project Specific insurance.



## SECTION 3.17: REPRESENTATIONS & WARRANTIES

### 3.17.1 Contractor's Knowledge of the Work

- A. The Contractor represents that the Contract Price and the detailed schedule for the execution of the Work are based on its own knowledge and judgment of the conditions and hazards involved, and not upon any representation of the Owner. The Owner assumes no responsibility for any understanding or representation made by any of its representatives during or prior to execution of the Contract unless such understandings or representations are expressly stated in the Contract and the Contract expressly provides that the Owner assumes the responsibility.

### 3.17.2 Contractor's Plans and Specifications

- A. All plans and specifications that the Contractor provides for any building, structure, system or equipment where required by federal, state, local laws and regulation as part of the Work shall bear the seal of a Professional Engineer duly registered in the State of Florida at no cost to the Owner.

### 3.17.3 Contractor's Warranties

- A. The Contractor unconditionally warrants to the Owner for a period of not less than two (2) years (unless otherwise stated in DIVISION 6: TECHNICAL SPECIFICATIONS) from the earlier of Final Acceptance or Substantial Completion and beginning of normal use by the Owner, that all Work furnished under the Contract including, but not limited to, materials, equipment, workmanship, and intellectual property, including derivative works will be:
  - 1. Performed in a safe, professional and workman like manner;
  - 2. Free from Defects in design, material, and workmanship;
  - 3. Fit for the use and purpose specified or referred to in the Contract;
  - 4. Suitable for any other use or purpose as represented in writing by the Contractor;
  - 5. In conformance with the Contract Documents; and
  - 6. Merchantable, new and of first-class quality.
  - 7. Performed in accordance with the Standard of Care as defined herein.
- B. The Contractor warrants that the Work shall conform to all applicable standards and regulations promulgated by federal, state, local laws and regulations, standards boards, organizations of the Department of State, and adopted industry association standards. If the Work fails to conform to such laws, rules, standards and regulations, the Owner may

return the Work for correction or replacement at the Contractor's expense, or return the Work at the Contractor's expense and cancel the Contract. If the Contractor performs services that fail to conform to such standards and regulations the Contractor shall make the necessary corrections at Contractor's expense. The Owner may correct services to comply with standards and regulations at the Contractor's expense if the Contractor fails to make the appropriate corrections within a reasonable time.

- C. If the Work includes items covered under a manufacturer's or Subcontractor's warranty that exceeds the requirements stated herein, the Contractor shall transfer such warranty to the Owner. Such warranties, do not in any way limit the warranty provided by the Contractor to the Owner.
- D. If, within the warranty period, the Owner determines that any of the workmanship or supplies are defective or exhibit signs of deterioration, in the opinion of the Owner, the Contractor, at its own expense, shall repair, adjust, or replace the defective Work to the complete satisfaction of the Owner. The Contractor shall pay all costs of removal, transportation, reinstallation, repair, and all other associated costs incurred in connection with correcting such Defects in the Work. The Contractor shall correct any Defects only at times designated by the Owner. The Contractor shall extend the warranty period an additional twelve (12) months (thirty-six (36) months total) for any portion of the Work that has undergone warranty repair or replacement.
- E. When operational conditions warrant, the Owner may repair or replace any defective equipment at the Contractor's expense. The Owner may repair or replace any defective Work at the Contractor's expense when the Contractor fails to correct the Defect within a reasonable time of receiving written notification of the Defect by the Owner, when the Contractor is unable to respond in an emergency situation, or when necessary to prevent the Owner from substantial financial loss. Where the Owner makes repairs or replaces defective Work, the Owner will issue the Contractor a written accounting and invoice of all such work to correct Defects. The Contractor's liability to the Owner for the costs of removal, transportation, reinstallation, and all other associated costs incurred in connection with correcting Defects in the Work will be limited to 1.5 times the original installed purchase price of the specific Work.
- F. The Contractor's warranty excludes remedy for damage or Defect caused by abuse, improper or insufficient maintenance, improper operation, or wear and tear under normal usage.

#### 3.17.4 Competent Performance of the Work

- A. The Contractor represents that it will conduct the Work in a manner and with sufficient labor, materials and equipment necessary to affect a diligent pursuance of the Work through Final Completion. If, in the sole opinion of the Owner, the Contractor fails to perform the Work as represented, the Owner may, at its sole discretion, take charge of the Work and furnish and provide the labor, materials, and equipment necessary to complete the Work as planned within the required time if the Owner deems the organization of the Contractor or its management, or the manner in which Contractor is

performing the Work, to be manifestly incompetent or inadequate to complete the Work as specified. The Contractor shall pay the Owner for the cost of all such Work completed by the Owner.

3.17.5 Encroachment on Outside Property

- A. The Contractor warrants that it shall not encroach on any rights or property of the public or adjoining property owners and shall hold the Owner harmless because of any encroachments that may result from the Contractor's lack of proper layout. If such an encroachment occurs, the Contractor agrees to remove any Work or portion thereof, that encroaches on the property of others, or that is built beyond legal building or setback limits, and shall rebuild the affected Work, or portion thereof, at the proper location, all without extra cost to the Owner.

3.17.6 Free and Clear Title

- A. The Contractor warrants that it has title to all equipment and materials furnished under the Contract where title will pass to the Owner, and that the equipment and materials passed to the Owner are free and clear of all liens, claims, security interests and encumbrances.

3.17.7 Performance of the Work

- A. The Contractor represents and warrants that it has the full corporate right, power and authority to enter into the Contract and to perform the acts required of it hereunder, and that the performance of its obligations and duties hereunder does not and will not violate any Contract to which the Contractor is a party or by which it is otherwise bound. The Contractor warrants that all items provided under the Contract shall be free from Defect and services shall be performed in a professional manner and with professional diligence and skill, consistent with the prevailing standards of the industry. The Contractor warrants that the Work will meet the functional and performance requirements defined in the Contract.

3.17.8 Safety Representation

- A. The Contractor represents and warrants to the Owner that it has the capacity to train and supervise its employees, Subcontractors and Suppliers to ensure the Work complies with all safety requirements of the Contract Documents. The Contractor shall be responsible for executing the necessary safety training and supervision of its employees and Subcontractors, and acknowledges that the Owner is not responsible for training or supervising the Contractor's employees, except when noted for the purpose of enforcing compliance with these safety requirements.

## SECTION 3.18: TERM & TERMINATION

3.18.1 Term of Contract (Through Work Completion)

- A. The Contract shall be in force through completion of all Work, Final Acceptance and final payment, including resolution of all disputes, claims, or suits, if any. Certain provisions of this Contract may extend past termination including Warranty provisions.

### 3.18.2 Termination for Convenience

- A. The Owner shall have the absolute right to terminate in whole or part the Contract, with or without cause, at any time after Award upon written notification of such termination.
- B. In the event of termination for convenience, the Owner will pay the Contractor for all disbursements and expenses that the Contractor has incurred, or those for which it becomes obligated prior to receiving the Owner's notice of termination. Owner will also pay the Contractor costs incurred less the reasonable resale value, of materials or equipment that the Contractor has already ordered, obtained or fabricated in connection with the Contract.
- C. Upon receipt of such notice of termination, the Contractor shall stop the performance of the Work hereunder except as may be necessary to carry out such termination and take any other action toward termination of the Work that the Owner may reasonably request, including all reasonable efforts to provide for a prompt and efficient transition as directed by the Owner.
- D. The Owner will have no liability to the Contractor for any cause whatsoever arising out of, or in connection with, termination (whether for convenience or default) including, but not limited to, lost profits, lost opportunities, or resulting change in business condition, except as expressly stated within these Contract Documents.

### 3.18.3 Termination for Default

- A. Owner may give the Contractor written notice to discontinue all Work under the Contract in the event that:
  - 1. The Contractor assigns or subcontracts the Work without prior written permission;
  - 2. Any petition is filed or any proceeding is commenced by or against the Contractor for relief under any bankruptcy or insolvency laws;
  - 3. A receiver is appointed for the Contractor's properties or the Contractor commits any act of insolvency (however evidenced);
  - 4. The Contractor makes an assignment for the benefit of creditors;
  - 5. The Contractor suspends the operation of a substantial portion of its business;
  - 6. The Contractor suspends the whole or any part of the Work to the extent that it impacts the Contractor's ability to meet the Work schedule, or the Contractor abandons the whole or any part of the Work;

7. The Contractor, at any time, violates any of the conditions or provisions of the Contract Documents, or the Contractor fails to perform as specified in the Contract Documents, or the Contractor is not complying with the Contract Documents;
  8. The Contractor attempts to willfully impose upon the Owner items or workmanship that are, in the Owner's sole opinion, defective or of unacceptable quality;
  9. The Contractor breaches any of the representations or warranties contained herein;
  10. The Contractor is determined, in the Owner's sole opinion, to have misrepresented the utilization of funds or misappropriated property belonging to the Owner; or
  11. There is any material change in the financial or business condition of the Contractor.
- B. If, within twenty-four (24) hours after service of such notice upon the Contractor, an arrangement satisfactory to the Owner has not been made by the Contractor for continuance of the Work, the Owner may terminate the Contract.
- C. Once a Contractor is declared in default, the surety shall assume the Contractor's place in all respects and shall be paid by the Owner all monies, if any, due the Contractor at the time of such notice to discontinue, or any monies thereafter that may become due the Contractor in accordance with the terms of the Contract.
- D. If the Contractor fails to make arrangements satisfactory to the Owner within ten (10) days after service to the Contractor of a notice to discontinue Work, and in the case where a Payment Bond and a Performance Bond are in effect, the surety has not exercised its option, then without further notice to the Contractor or the surety, the Owner may terminate the Contract and shall have the power to complete the Work herein described as it may determine. In such a case, the Owner shall have the right to take possession of and use any of the materials, plant, tools, equipment, supplies and property of any kind provided by the Contractor for the purpose of this Work.
- E. The Owner will charge the expense of completing the Work to the Contractor and will deduct such expenses from monies due, or which at any time thereafter may become due, to the Contractor. If such expenses are more than the sum that would otherwise have been payable under the Contract, then the Contractor shall pay the amount of such excess to the Owner upon notice of the expenses from the Owner. The Owner shall not be required to obtain the lowest price for completing the Work under the Contract, but may make such expenditures that, in its sole judgment, shall best accomplish such completion. The Owner will, however, make reasonable efforts to mitigate the excess costs of completing the Work.
- F. The Contract Documents shall in no way limit the Owner's right to all remedies for nonperformance provided under law or in equity, except as specifically set forth herein. In the event of termination for nonperformance, the Contractor shall immediately surrender all Work records to the Owner. In such a case, the Owner may offset any money

owed to the Contractor against any liabilities resulting from the Contractor's nonperformance.

- G. The Owner has no responsibility whatsoever to issue notices of any kind, including but not limited to deficient performance letters and scorecards, to the Contractor regarding its performance prior to default by Contractor for performance related issues.
- H. The Owner shall have no liability to the Contractor for termination costs arising out of the Contract, or any of the Contractor's subcontracts, as a result of termination for default.

## SECTION 3.19: MISCELLANEOUS TERMS & CONDITIONS

### 3.19.1 Independent Contractor

- A. This Agreement does not create an employer/employee relationship between the parties. The parties agree and intend that the Contractor is a separate and independent enterprise from the Owner. This Agreement shall not be construed as creating any joint employment relationship between the Contractor and the Owner and the Owner will not be liable for any obligation incurred by the Contractor, including but not limited to unpaid minimum wages and/or overtime, or any other obligation of the Contractor, whether arising under state or federal law, or contract, to Contractor's employees, subcontractors, or subvendors.
- B. Contractor undertakes performance of the Services as an independent contractor and shall be wholly responsible for the methods of performance.
- C. The Contractor shall not pledge the Owner's credit or make it a guarantor of payment or surety for any contract, debt, obligation, judgment, lien or any form of indebtedness and shall have no right to speak for or bind the Owner in any manner.
- D. Contractor further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

### 3.19.2 Authority to Practice, Compliance with Laws, Public Records, and Trade Secrets

- A. The Contractor hereby represents and warrants that it has and will continue to maintain all licenses and approvals required to conduct its business, and that it will at all times conduct its business activities in a reputable manner.
- B. In performing the Services, the Contractor shall comply with all applicable regulatory requirements, including federal, state, special district, and local laws, rules, regulations, orders, codes, criteria, and standards.
- C. Public Records. The parties acknowledge and agree that the Owner is a public agency subject to Chapter 119, Florida Statutes. To the extent the Contractor is a company acting on behalf of the Owner pursuant to Section 119.0701, Florida Statutes, the Contractor must comply with all public records laws in accordance with Chapter 119, Florida Statutes. In accordance with Chapter 119, Florida Statutes, the Contractor agrees to:

(1) Keep and maintain all records that ordinarily and necessarily would be required by the Owner to perform the services under this Agreement.

(2) Upon request from the Owner, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the costs provided in Chapter 119, Florida Statutes, or as otherwise provided by law.

(3) Ensure that public records that are exempt, or confidential and exempt, from public records disclosures are not disclosed as except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the Contractor does not transfer the records to the Owner.

(4) Upon completion of the services under this Agreement, at no cost, either transfer to the Owner all public records in the Contractor's possession or keep and maintain public records required by the Owner to perform the services. If the Contractor transfers all public records to the Owner upon completion of the services, the Contractor must destroy any duplicate public records that are exempt, or confidential and exempt, from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the services under this Agreement, the Contractor must meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner, in a format that is compatible with the information technology systems of the Owner.

(5) IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE OWNER'S CUSTODIAN OF PUBLIC RECORDS AT:

City of Wauchula  
ATTN: Stephanie Camacho  
127 South 7<sup>th</sup> Avenue  
Wauchula, Florida 33873\_\_\_\_\_

If the CONSULTANT does not comply with the provisions of this section, the City will enforce the Agreement provisions in accordance herewith and may unilaterally cancel this Agreement in accordance with Florida law.

D. Trade Secrets and Proprietary Confidential Business Information. Documents submitted by Contractor which it contends constitute trade secrets as defined in Sections 812.081 and 688.002, Florida Statutes, or confidential and propriety business information when held by the Owner as a utility owner, consistent with Section 119.0713(5), Florida Statutes, and which are clearly marked or stamped as confidential by the Contractor at the time of submission to the Owner, will not be subject to public access. However, should a requestor of public records challenge Contractor's claim of trade secret or confidential and proprietary business information, within five (5) calendar days of such challenge, Contractor must provide a separate written affidavit that includes an indemnification and release

guarantee, as approved by the Owner's Attorney or designee, to the Owner to support its claim that the alleged trade secrets or proprietary and confidential business information actually constitutes same as defined by law. Contractor must demonstrate the need for confidentiality of the documentation by showing a business advantage or opportunity to obtain an advantage would be gained if the documentation were released. Otherwise, Contractor is required to timely seek a protective order in the Circuit Court of Hardee County to prevent the Owner's release of the requested records.

3.19.3 Public Entity Crimes, Section 287.133, Fla. Stat.; Scrutinized Companies List/Countries of Concern/Interests of Foreign Countries, Sections 287.135, 215.473, and 287.138, Fla. Stat.; and Anti-Trust Vendor Violator, Section 287.137, Fla. Stat.

A. Pursuant to Section 287.133(2)(a), Florida Statutes, Contractor hereby certifies that neither it nor its affiliate(s) have been placed on the convicted vendor list following a conviction for a public entity crime. If placed on that list, Contractor must notify the Owner immediately and may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

B. Contractor hereby certifies that it: (a) has not been placed on the Scrutinized Companies that Boycott Israel List, nor is engaged in a boycott of Israel; (b) has not been placed on the Scrutinized Companies with Activities in Sudan List nor the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and (c) has not been engaged in business operations in Cuba or Syria. If Owner determines that Contractor has falsely certified facts under this Paragraph or if Contractor is found to have been placed on the Scrutinized Companies Lists or is engaged in a boycott of Israel after the execution of this Agreement, the Owner will have all rights and remedies to terminate this Contract consistent with Section 287.135, Florida Statutes.

C. The Contractor has a continuous duty to disclose to the Owner if the Contractor or any of its affiliates, as defined by section 287.137(1), Fla. Stat., are placed on the Antitrust Violator Vendor List. Pursuant to section 287.137, Fla. Stat., "A person or an affiliate who has been placed on the antitrust violator vendor list following a conviction or being held civilly liable for an antitrust violation may not submit a bid, proposal, or reply for any new contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply for a new contract with a public entity for the construction or repair of a public building or public work; may not submit a bid, proposal, or reply on new leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a new contract with a public entity; and may not transact new business with a public entity."



3.19.4 Ambiguous Contract Provisions

- A. The parties agree that this Contract has been the subject of meaningful analysis and/or discussions of the specifications, terms and conditions contained in this Contract. Therefore, doubtful or ambiguous provisions, if any, contained in this Contract will not be construed against the party who physically prepared this Contract. The rule commonly known as "Fortius Contra Proferentem" will not be applied to this Contract or any interpretation thereof.

3.19.5 Amendments

- A. This Contract may not be altered or amended except in writing, signed by the Owner and the Contractor, or each of their duly authorized representatives.

3.19.6 Choice of Law, Venue, and Waiver of Jury Trial

- A. This Contract, and the rights and duties of the parties arising from or relating to this Contract or its subject matter, shall be construed in accordance with the laws of the State of Florida and the ordinances of the City of Wauchula without regard to its conflicts of provisions. Each of the parties irrevocably submits to the exclusive jurisdiction of the courts of Hardee County, Florida, and further agree that the venue for any legal action brought by or filed against the Owner relating to any matter arising under this Contract shall be exclusively in that state or federal court, sitting in Hardee County, Florida that has jurisdiction over such legal actions.
  - B. WAIVER OF JURY TRIAL. BY ENTERING INTO THIS AGREEMENT, THE CONTRACTOR AND THE OWNER HEREBY EXPRESSLY WAIVE ANY RIGHTS THEY MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT.

3.19.7 Conflict of Interest

- A. This Contract is subject to Chapter 112, Florida Statutes, and Contractor shall disclose the name of any officer, director, employee, or other agent who is also an employee of the Owner or the City of Wauchula. The Contractor shall also disclose the name of any Owner or City of Wauchula employee who owns, directly or indirectly, more than a 5% interest in Contractor's, or its affiliates, business entity.

3.19.8 Cumulative Remedies

- A. Except as otherwise expressly provided in this Contract, all remedies provided for in this Contract shall be cumulative and in addition to and not in lieu of any other remedies available to either party at law, in equity or otherwise.

3.19.9 Entire Agreement

- A. This Contract contains all of the understandings and agreements of the parties hereto in respect of the subject matter hereof as of the Effective Date of the Contract. Any and all prior understandings and agreements, expressed or implied, between the parties hereto in respect of the subject matter hereof shall be superseded hereby. Parol or extrinsic evidence will not be used to vary or contradict the express terms of this Contract.
- B. The Contract Documents are complementary; what is called for by one is binding as if called for by all. The Contractor shall, upon discovery, inform the Owner in writing of any conflict, error or discrepancy in the Contract Documents. Should the Contractor proceed with the Work prior to written resolution of the error or conflict by the Owner, all Work done is at the sole risk of the Contractor.

3.19.10 Expanded Definitions

- A. Unless otherwise specified, words importing the singular include the plural and vice versa and words importing gender include all genders. The term "including" means "including without limitation", and the terms "include", "includes" and "included" have similar meanings. Any reference in this Contract to any other agreement is deemed to include a reference to that other agreement, as amended, supplemented or restated from time to time. Any reference in the Contract to "all applicable laws, rules and regulations" means all federal, state and local laws, rules, regulations, ordinances, statutes, codes and practices.

3.19.11 Force Majeure

- A. No party shall be liable for any default or delay in the performance of its obligations under this Contract due to an act of God or other event to the extent that: (a) the non-performing party is without fault in causing such default or delay; (b) such default or delay could not have been prevented by reasonable precautions; and (c) such default or delay could not have been reasonably circumvented by the non-performing party through the use of alternate sources, work-around plans or other means. Such causes include, but are not limited to: act of civil or military authority (including but not limited to courts or administrative agencies); acts of God; war; terrorist attacks; riot; insurrection; inability of the Owner to secure approval, validation or sale of bonds; inability of the Owner or the Contractor to obtain any required permits, licenses or zoning; blockades; embargoes; sabotage; epidemics; fires; hurricanes, tornados, floods; or strikes.
- B. In the event of any delay resulting from such causes, the time for performance of each of the parties hereunder (including the payment of monies if such event actually prevents payment) shall be extended for a period of time reasonably necessary to overcome the effect of such delay, except as provided for elsewhere in the Contract Documents.
- C. In the event of any delay or nonperformance resulting from such causes, the party affected shall promptly notify the other in writing of the nature, cause, date of commencement and the anticipated impact of such delay or nonperformance. Such

written notice, including Change Orders, shall indicate the extent, if any, to which it is anticipated that any delivery or completion dates will be thereby affected.

3.19.12 Headings

- A. The division of this Contract into sections, the insertion of headings and/or index numbers and the provision of a table of contents are for convenience of reference only and are not to affect the construction or interpretation of this Agreement.

3.19.13 Language and Measurements

- A. All communication between the Contractor and the Owner, including all documents, notes on drawings, and submissions required under the Contract, will be in the English language. Unless otherwise specified in the Contract, the US System of Measurements shall be used for quantity measurement. All instrumentation and equipment will be calibrated in US System of Measures.

3.19.14 Nonwaiver

- A. Failure by either party to insist upon strict performance of any of the provisions of the Contract will not release either party from any of its obligations under the Contract.

3.19.15 Publicity and Advertising

- A. The Contractor shall not take any photographs for the purpose of making any announcements or release any information concerning the Contract or the Work to any member of the public, press or official body unless prior written consent is obtained from the Owner. The Owner is governed by the Florida Public Records Laws therefore all Contract Documents are available for public inspection, subject to certain statutory exemptions as set forth in Chapter 119, *Florida Statutes*. In addition, the Owner is governed by Florida Sunshine Laws and as such, certain meetings are required to be open to the public.

3.19.16 References

- A. Unless otherwise specified, each reference to a statute, ordinance, law, policy, procedure, process, document, drawing, or other informational material is deemed to be a reference to that item, as amended or supplemented from time to time. All referenced items shall have the enforcement ability as if they are fully incorporated herein.

3.19.17 Relationship of the Parties

- A. The Contractor agrees that it shall perform the Work as an independent contractor and that it does not (a) have the power or authority to bind the Owner or to assume or create any obligation or responsibility, express or implied, on the Owner's part or in the Owner's name, except as may be authorized by the Owner under a separate written document, or

(b) represent to any person or entity that it has such power or authority except as may be authorized by the Owner under a separate written document.

3.19.18 Severability

- A. In the event that any provision of this Contract is found to be unenforceable under applicable law, the parties agree to replace such provision with a substitute provision that most nearly reflects the original intentions of the parties and is enforceable under applicable law, and the remainder of this Contract shall continue in full force and effect.

3.19.19 Subcontracting or Assigning of Contract

- A. Each party agrees that it shall not subcontract, assign, delegate, or otherwise dispose of the Contract, the duties to be performed under the Contract, or the monies to become due under the Contract without the other party's prior written consent.
- B. The assignment of the Contract will not relieve either of the parties of any of its obligations until such obligations have been assumed in writing by the assignee. If the Contract is assigned by either of the parties, it will be binding upon and will inure to the benefit of the permitted assignee. The Contractor shall be liable for all acts and omissions of its assignee or its Subcontractor.
- C. The Contractor agrees to retain the services of such subcontractors and subconsultants as reasonably required to provide the Work required by this Agreement. All subcontractors and subconsultants will be under contract to the Contractor. The Contractor shall supervise and coordinate all subcontractors and subconsultants and shall be responsible to the Commission for their work.
- D. Any subcontractor or subconsultant retained by the Contractor shall be licensed in the State of Florida in the field applicable to such subcontractor or subconsultant's scope of work.
- E. The Contractor's choice of subcontractors must be approved by the Owner. While the Owner shall have the right to approve or reject each sub-consultant, such approval shall not be unreasonably withheld.
- F. In no event will the Contractor subcontract portions of the Work under this Agreement without the approval of the Owner. The Owner's approval of any subcontractor or subconsultant will not relieve the Contractor of its responsibility for the acts and omissions of such subcontractors or subconsultants. Any subcontract shall include, among other appropriate provisions, those provisions of this Agreement that by its terms are required to be provided in the subcontract agreement.
- G. The Owner may reasonably request that the Contractor contract with additional subcontractors or subconsultants in order to adequately perform the Work on the Project.

3.19.20 Survival

- A. The obligations of the Owner and the Contractor under this Contract that are not, by the express terms of this Contract, fully to be performed during the Term, shall survive the termination of this Contract for any reason.

3.19.21 Third Party Agreements

- A. Unless otherwise agreed in writing by the Owner, the Owner shall have no obligation to enter into any third party agreements under this Contract. Such third party agreements shall include, but not be limited to: joint check agreements, and revocable or irrevocable letters of direction with sureties. In the event the Owner agrees to execute any such agreement(s), then such agreement(s) shall incorporate additional language as required by the Owner.

3.19.22 Time and Date

- A. Unless otherwise specified, references to time of day or date mean the local time or date in Wauchula, Florida. If under this Contract any payment or calculation is to be made, or any other action is to be taken, on or as of a day that is not a regular business day for the Owner, that payment or calculation is to be made, and that other action is to be taken, as applicable, on or as of the next day that is a regular business day. Where reference is made to day or days, it means calendar days. Where reference is made to workday, workdays, business day, or business days, it means regular working days for the Owner.

3.19.23 Waiver of Claims

- A. A delay or omission by the Owner hereto to exercise any right or power under this Contract shall not be construed to be a waiver thereof. A waiver by the Owner under this Contract shall not be effective unless it is in writing and signed by the party granting the waiver. A waiver by a party of a right under, or breach of, this Contract shall not be construed to operate as a waiver of any other or successive rights under, or breaches of, this Contract.
- B. The Contractor's obligations to perform and complete the Work in accordance with the Contract shall be absolute. None of the following will constitute a waiver of any of the Owner's rights under the Contract: approval or payment of any progress payments or any other payments, including final payment; issuance of the Certificate of Substantial Completion or Certificate of Contract Completion; any use or occupancy of the Work by the Owner; nor any correction of faulty or defective work by the Owner.

3.19.24 Attorneys' Fees

- A. If any action or other proceeding is brought for the enforcement of this Agreement or due to any uncured dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, or to interpret this Agreement, the prevailing Party shall

be entitled to recover from the other Party reasonable attorney's fees and other costs incurred in the prosecution of the action or proceeding, including on appeal.

[END OF SECTION]

## DIVISION 4: SUPPLEMENTAL CONDITIONS

There are no Supplemental Conditions included in the Bid Documents for this Project.

# DIVISION 5: FORMS



## SECTION 5.1: FORMS TO SUBMIT WITH BID

The following forms must be completed and included in the Bidder's response to this Solicitation. This list represents the forms only and does not include all information and items necessary to be responsive to the Bid Solicitation.

- 5.1.1 Bid Form
- 5.1.2 Bid Security
- 5.1.3 Bidder's Qualifications
- 5.1.4 Bidder's Statement of Disputes, Litigation, Arbitration, and Surety Completion
- 5.1.5 Drug-Free Workplace Certificate
- 5.1.6 Florida Trench Safety Act Acknowledgement
- 5.1.7 Non-Collusion Affidavit
- 5.1.8 Public Entity Crimes Statement
- 5.1.9 Tabulation of Subcontractors and Suppliers

## SECTION 5.2: FORMS FOR CONVENIENCE

The following forms are included for convenience in the Bid Documents. The Owner may require additional forms during the performance of the Work:

- 5.2.1 Certificate of Final Completion Form
- 5.2.2 Certification of Substantial Completion Form
- 5.2.3 Change Order Form
- 5.2.4 Contractor's Application for Payment Form
- 5.2.5 Field Order Form
- 5.2.6 Notice of Award Form
- 5.2.7 Notice to Proceed Form
- 5.2.8 Payment Bond Form
- 5.2.9 Performance Bond Form
- 5.2.10 Work Change Directive Form

5.1.1 Bid Form

PROJECT: City of Wauchula – Service Area 3 Watermain Rehabilitation Phase 2  
Project No. 046292031

A. Bid Recipient

1. This Bid is submitted to:

City of Wauchula  
Attn: Stephanie Camacho, City Clerk  
126 South 7<sup>th</sup> Street  
Wauchula, FL 33873

2. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the Owner in the form included in the Bid Documents to perform all Work as specified or indicated in the Bid Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bid Documents.

B. Bidder's Acknowledgements

1. The Bidder accepts all of the terms and conditions of DIVISION 1: INSTRUCTIONS TO BIDDERS, including without limitation those dealing with the disposition of the Bid Security. The Bid will remain subject to acceptance for 120 days after the Bid Opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

C. Bidder's Representations

1. In submitting this Bid, the Bidder represents that:
  - a. The Bidder has received from the Issuing Office a complete set of Bid Documents and other related data identified in the Bid Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.

Addendum Date

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

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

- b. The Bidder has examined and carefully studied the Bid Documents, Addenda, and the other related data identified in the Bidding Documents, and provided the information to Subcontractors and Suppliers who have provided quotations to the Bidder for the Work.

- c. The Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- d. The Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- e. The Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in DIVISION 1: INSTRUCTIONS TO BIDDERS, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in DIVISION 1: INSTRUCTIONS TO BIDDERS.
- f. The Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplemental examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bid Documents to be employed by the Bidder, and safety precautions and programs incident thereto.
- g. The Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bid Documents
- h. The Bidder is aware of the general nature of the Work to be performed by the Owner and others at the Site that relates to the Work as indicated in the Bid Documents.
- i. The Bidder has correlated the information known to the Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bid Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bid Documents.
- j. The Bidder has given the Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that the Bidder has discovered in the Bid Documents, and the written resolution thereof by the Engineer is acceptable to the Bidder.

- k. The Bid Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- l. Bidder certifies Bidder's authority and qualification to do business in the state where the Project is located, that the Bidder is a state-certified Contractor in good standing and holds current registration with the Florida Construction Industry Licensing Board of the Florida Department of Professional Regulation, that the type of license is in a class that authorizes the Bidder to perform the general nature of the construction to be performed on this project, and that the Bidder's State Contractor's license number for the state of the project is shown on the Bid Form.
- m. Bidder certifies to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made. To support the efforts, any non American-made equipment proposed must be accompanied by proof of good-faith efforts to utilize American-made equipment such as written quotes, solicitations, advertisements, etc.

D. Bidder's Certification

1. Bidder certifies that:

- a. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- b. The Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- c. The Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- d. The Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:
  - i. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - ii. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of the Owner, (b) to establish Bid Prices at artificial non-competitive levels, or (c) to deprive the Owner of the benefits of free and open competition;

- iii. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Owner, a purpose of which is to establish Bid Prices at artificial, non-competitive levels; and
- iv. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

E. Basis of Bid

- 1. The Bidder has reviewed DIVISION 6: TECHNICAL SPECIFICATIONS; and will complete the Work in accordance with the Contract Documents for the following price(s):

A. BASE BID

<b>BID FORM</b> <b>CITY OF WAUCHULA</b> <b>SERVICE AREA 3 WATERMAIN REPLACEMENT</b>					
ITEM	DESCRIPTION	EST. QTY.	U/M	BID PRICE PER UNIT (\$)	TOTAL BID PRICE (\$)
1	Mobilization/AsBuilts	1	LS		
2	Project Closeout	1	LS		
3	MOT	1	LS		
4	Erosion and Sediment Control, Utility Locates and Pre-construction Video	1	LS		
5	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	5,980	LF		
6	8" PVC C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	1,790	LF		
7	Fire Hydrant Assembly - 4-1/2" Pump Nozzle & (2) 2-1/2" Hose Nozzles and Valve (includes all fittings)	11	EA		
8	6" Resilient Seat Gate Valve, Modified Wedge Disc Type	22	EA		
9	8" Resilient Seat Gate Valve, Modified Wedge Disc Type	5	EA		
10	Directional Drilling (Including 8" HDPE Pipe, Transision Fittings, Excavation and Resotation)	150	LF		
11	Directional Drilling (Including 10" HDPE Pipe, Transision Fittings, Excavation and Resotation)	140	LF		
12	Import Fill for Unsuitable Material	5,756	CY		
13	12" X 6" Tapping Sleeve and Valve	4	EA		
14	6" Tapping Sleeve and Valve	10	EA		
15	8" Tapping Sleeve and Valve	1	EA		
16	Driveway / Sidewalk Repair	2,190	SY		
17	Asphalt Roadway Demolition and Repair	1,260	SY		
18	Site Restoration	1	LS		
19	Fire Hydrant Removal	16	EA		
20	Grout Fill Abandoned Water Main	46	CY		
21	New Meter Box, Curb Stop, and Meter Yolk	97	EA		
22	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	42	EA		
23	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	39	EA		
24	6" Line Stop	10	EA		
25	8" Line Stop	2	EA		
<b>IMPROVEMENTS TOTAL</b>					
26	10% Contract Contingency (10% of above total)				
<b>TOTAL BASE BID PRICE</b>					

<b>ADDITIVE BID ITEMS</b>								
<b>ADDITIVE BID ITEM 1 - Main Street (between Florida Ave. and 10th Ave.)</b>					<b>EST. QTY.</b>	<b>U/M</b>	<b>BID PRICE PER UNIT (\$)</b>	<b>TOTAL BID PRICE(\$)</b>
27	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Resotation)				160	LF		
28	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				300	LF		
29	8" Resilient Seat Gate Valve, Modified Wedge Disc Type				1	EA		
30	Grout Fill Abandoned Water Main				4	CY		
31	New Meter Assembly				7	EA		
32	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				4	EA		
33	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				2	EA		
<b>ADDITIVE BID ITEM 2 - Florida Avenue (between Main St. and Palmetto St.)</b>					<b>EST. QTY.</b>	<b>U/M</b>	<b>BID PRICE PER UNIT (\$)</b>	<b>TOTAL BID PRICE(\$)</b>
34	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Resotation)				150	LF		
35	8" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				20	LF		
36	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				335	LF		
37	6" Resilient Seat Gate Valve, Modified Wedge Disc Type				1	EA		
38	12" X 8" Tapping Sleeve and Valve				1	EA		
39	Driveway / Sidewalk Repair				218	SY		
40	Asphalt Roadway Demolition and Repair				21	SY		
41	Grout Fill Abandoned Water Main				4	CY		
42	New Meter Assembly				7	EA		
43	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				6	EA		
44	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				2	EA		
<b>ADDITIVE BID ITEM 3 - 10th Avenue (between Main St. and Palmetto St.)</b>					<b>EST. QTY.</b>	<b>U/M</b>	<b>BID PRICE PER UNIT (\$)</b>	<b>TOTAL BID PRICE(\$)</b>
45	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Resotation)				175	LF		
46	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				365	LF		
47	12" X 6" Tapping Sleeve and Valve				1	EA		
48	Driveway / Sidewalk Repair				13	SY		
49	Asphalt Roadway Demolition and Repair				45	SY		
50	New Meter Assembly				7	EA		
51	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				1	EA		
52	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				4	EA		
<b>ADDITIVE BID ITEM 4 - 9th Avenue (between Main St. and Palmetto St.)</b>					<b>EST. QTY.</b>	<b>U/M</b>	<b>BID PRICE PER UNIT (\$)</b>	<b>TOTAL BID PRICE(\$)</b>
53	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Resotation)				145	LF		
54	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				360	LF		
55	12" X 6" Tapping Sleeve and Valve				1	EA		
56	Driveway / Sidewalk Repair				83	SY		
57	Grout Fill Abandoned Water Main				4	CY		
58	New Meter Assembly				2	EA		
59	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				1	EA		
60	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				1	EA		
<b>ADDITIVE BID ITEM 5 - 7th Avenue (between Main St. and Palmetto St.)</b>					<b>EST. QTY.</b>	<b>U/M</b>	<b>BID PRICE PER UNIT (\$)</b>	<b>TOTAL BID PRICE(\$)</b>
61	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Resotation)				125	LF		
62	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)				550	LF		
63	6" Tapping Sleeve and Valve				1	EA		
64	Asphalt Roadway Demolition and Repair				550	SY		
65	Grout Fill Abandoned Water Main				4	CY		
66	New Meter Assembly				26	EA		
67	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				15	EA		
68	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)				3	EA		

TOTAL BASE BID (INCLUSIVE OF 10% CONTINGENCY AND **NOT** BID ADDITIVES):

\_\_\_\_\_ (\$ \_\_\_\_\_)  
(words) (numerals)

The Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

F. Time of Completion

1. The Bidder agrees that the Work will be substantially complete within 320 calendar days after the issuance of the Notice to Proceed, and completed and ready for final payment in accordance with the Contract Documents within 350 calendar days after the date when the Contract Time commences to run.
2. The Bidder accepts the provisions of the Agreement as to liquidated damages.

G. Attachments to This Bid

1. The following documents are submitted with and made a part of this Bid:
  - a. DIVISION 5: FORMS – Bid Form
  - d. DIVISION 5: FORMS – Bid Security
  - c. DIVISION 5: FORMS – Bidder’s Qualifications
  - d. DIVISION 5: FORMS – Bidder’s Statement of Disputes, Litigation, Arbitration, and Surety Completion, Last Three (3) Years
  - e. DIVISION 5: FORMS – Drug-Free Workplace Certificate
  - f. DIVISION 5: FORMS – Florida Trench Safety Act Acknowledgement
  - g. DIVISION 5: FORMS – Non-Collusion Affidavit
  - h. DIVISION 5: FORMS – Public Entity Crimes Statement
  - i. DIVISION 5: FORMS – Tabulation of Subcontractors and Suppliers
  - j. Evidence of authority to do business in the State of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

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

H. Defined Terms

1. The terms used in this Bid with initial capital letters have the meanings stated in DIVISION 1: INSTRUCTIONS TO BIDDERS and DIVISION 3: TERMS AND CONDITIONS.

I. Bid Submittal

1. This Bid is submitted by:

If Bidder is:

*An Individual*

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_ (SEAL)  
(Individual's signature)

Doing business as: \_\_\_\_\_

*A Partnership*

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

By: \_\_\_\_\_ (SEAL)  
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

State Contract License No. \_\_\_\_\_

*A Corporation*

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

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

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_  
(Signature – attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_  
(Corporate Seal)

Attest \_\_\_\_\_  
(Signature of Corporate Secretary)

Date of Qualification to do business in Florida is \_\_\_\_/\_\_\_\_/\_\_\_\_.



State Contractor License No. \_\_\_\_\_.

*A Joint Venture*

Name of Joint Venture: \_\_\_\_\_

First Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

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

Second Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

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

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address \_\_\_\_\_  
\_\_\_\_\_

Phone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

E-mail \_\_\_\_\_

SUBMITTED on \_\_\_\_\_, 20\_\_\_\_\_.

State Contractor License No. \_\_\_\_\_.

5.1.2 Bid Security Form

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

BIDDER (Name and Address):

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

OWNER (Name and Address):

BID

Bid Due Date:

Project (Brief Description Including Location):

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum \_\_\_\_\_ (Words) \_\_\_\_\_ (Figures)

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

BIDDER

SURETY

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

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

By: \_\_\_\_\_  
Signature and Title

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

Attest: \_\_\_\_\_  
Signature and Title

Attest: \_\_\_\_\_  
Signature and Title

Note: Above addresses are to be used for giving required notice.

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

- J. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
  
- K. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

5.1.3 Bidder's Qualifications

The Bidder warrants the truth and accuracy of all statements and answers herein contained.  
(Include additional sheets if necessary.)

THIS QUESTIONNAIRE MUST BE COMPLETED AND SUBMITTED WITH YOUR BID.

- A. LICENSE # and COMPANY'S NAME: \_\_\_\_\_
- B. CO. PHYSICAL ADDRESS: \_\_\_\_\_
- C. TELEPHONE NUMBER: (\_\_\_\_) \_\_\_\_\_ D. FAX: (\_\_\_\_) \_\_\_\_\_
- E. Bidding as an; individual: \_\_\_\_\_; a partnership: \_\_\_\_\_; a corporation: \_\_\_\_\_; a joint venture: \_\_\_\_\_.
- F. If a partnership: list names and addresses of partners; if a corporation: list names of officers, directors, shareholders, and state of incorporation; if joint venture: list names and addresses of venturers and the same if any venturer is a corporation for each such corporation, partnership, or joint venture:  
\_\_\_\_\_  
\_\_\_\_\_
- G. Your organization has been in business (under this firm's name) as a \_\_\_\_\_  
\_\_\_\_\_ for how many years? \_\_\_\_\_
- H. Describe and give the date and owner of the last three government projects you've completed which are similar in cost, type, size, and nature as the one proposed (for a public entity). Include contact name and phone number:  
\_\_\_\_\_  
\_\_\_\_\_
- I. Have you ever been awarded additional time to complete work awarded to you during the past five (5) years? If so, state when, where (contact name, address, and phone number) and why.  
\_\_\_\_\_  
\_\_\_\_\_
- J. Have you ever been assessed liquidated damages under a contract during the past five (5) years? If so, state when, where (contact name, address, and phone number) and why.  
\_\_\_\_\_  
\_\_\_\_\_
- K. Have you ever failed to complete work awarded to you? If so, state when, where (contact name, address, phone number) and why?

L. Have you ever been debarred or prohibited from bidding on a governmental entity's construction project? If yes, name the entity and describe the circumstances:

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M. Name three individuals, governmental entities, or corporations for which you have performed similar work and to which you refer. Include contact name and phone number:

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N. What specific steps have you taken to examine the physical conditions at or contiguous to the site, including but not limited to, the location of existing underground facilities?

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O. What specific physical conditions, including but not limited to, the location of existing underground facilities have you found which will, in any manner, affect cost, progress, performance, or finishing of the work?

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P. Will you subcontract any part of this Work? If so, describe which major portion(s):

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Q. If any, list (with contract amount) MBE/WBE's to be utilized:

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R. What equipment do you own to accomplish this Work?

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S. What equipment will you purchase/rent for the Work? (specify which)

T. List the following in connection with the Surety which is providing the Bond(s):

Surety's Name: \_\_\_\_\_

Surety's Address: \_\_\_\_\_

Name, address and phone number of Surety's resident agent for service of process in Florida:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: ( ) \_\_\_\_\_

5.1.4 Bidder's Statement of Disputes, Litigation, Arbitration, and Surety Completion – Last Three (3) Years

Project	Name and Address of Owner or Engineer	Name and Phone Number of Owner or Engineer Representative	Date of Contract	Amount	Status



5.1.5 Drug-Free Workplace Certificate

I, the undersigned, in accordance with Section 287.087, *Florida Statutes* hereby certify that

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(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 workplace; 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 under bid or proposal, the employees will abide by the terms of the statement and will notify the employer of any conviction or plea of guilty or nolo contendere to any violation of Chapter 1893 or any controlled substance law of the State of Florida or the United States for a violation occurring in the workplace, no later than 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 workplace through the implementation of the drug-free workplace program.

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

---

Authorized Signature

---

Date Signed

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

County of: \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

Personally known \_\_\_\_\_ or Produced Identification \_\_\_\_\_  
Specify Type of Identification

---

Signature of Notary

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

5.1.6 Certificate of Compliance with the Florida Trench Safety Act

The Bidder acknowledges sole responsibility for complying with the Florida Trench Safety Act (Act) and Occupational Safety and Health Administration's excavation safety standard 29 CFR 1926.650 (Subpart P as amended). The Bidder further acknowledges that included in the various items of the Proposal and in the Total Base Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The Bidder further identifies the costs to be summarized below:

	Trench Safety Method (Description)	Units of Measure (LF, SY)	Unit (Quantity)	Extended Cost	Unit Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____

Total:

Failure to complete the above may result in the Bid being declared non-responsive. The costs indicated above are provided to comply with the Act and shall not constitute grounds for any additional compensation to that listed for the separate line items of the Proposal Form.

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

Bidder: \_\_\_\_\_

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

Authorized Signature: \_\_\_\_\_

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

County of: \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

Personally known \_\_\_\_\_ or Produced Identification \_\_\_\_\_

Specify Type of Identification

\_\_\_\_\_  
Signature of Notary

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

5.1.7 Non-Collusion Affidavit of Prime Bidder

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says that:  
Name

1. He/She is \_\_\_\_\_ of \_\_\_\_\_, the  
Title Company  
Bidder that has submitted the attached bid;

2. He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

3. Such Bid is genuine and is not a collusive or sham Bid;

4. Neither the said Bidder nor any of his/her officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or has refrained from bidding in connection with such Contract; nor in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or if any other Bidder; not has fixed any overhead, profit or cost element of the Bid Price, or the Bid Price of any other Bidder; not has secured through any collusion, conspiracy, connivance or unlawful agreement, any advantage against the City of Wauchula, Florida or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

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

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

My commission expires \_\_\_\_\_

5.1.8 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 Wauchula, 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 of the individual signing this sworn statement: \_\_\_\_\_.)

2. I understand that a "public entity crime" as defined in Section 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 such an agency or political subdivision of any other state or of the United States and involving anti-trust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Section 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 stated trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that "affiliate" as defined in Section 287.133(1)(a), *Florida Statutes*, means:
  1. A predecessor or successor of a person convicted of a public entity crime: or
  2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters in to 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 Section 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 which 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 of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

\_\_\_ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in 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 the 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)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM 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)

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Personally known \_\_\_\_\_

OR Produced Identification \_\_\_\_\_

Notary Public-State of \_\_\_\_\_

My commission expires \_\_\_\_\_

\_\_\_\_\_  
(Type of Identification)

\_\_\_\_\_  
(Printed, Typed or Stamped  
Commissioned Name of Notary Public)

5.1.9 Tabulation of Subcontractors and Suppliers

The Undersigned states that the following is a full and complete list of the proposed Subcontractors and Suppliers on this Project and the class of work to be performed by each and that such list will not be added to nor altered without written consent to the Owner through the Engineer.

	SUBCONTRACTOR OR SUPPLIER AND ADDRESS	MBE/WBE STATUS	CLASS OF WORK OR MATERIAL
1.	_____	_____	_____
	_____		
2.	_____	_____	_____
	_____		
3.	_____	_____	_____
	_____		
4.	_____	_____	_____
	_____		
5.	_____	_____	_____
	_____		
6.	_____	_____	_____
	_____		
7.	_____	_____	_____
	_____		
8.	_____	_____	_____
	_____		

BIDDER: \_\_\_\_\_

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

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

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

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

5.2.1 Certificate of Final Completion

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

This Certificate of Final Completion applies to:

All Work under the Contract Documents:

The following specified portions:

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\_\_\_\_\_  
Date of Final Completion

The Work to which this Certificate applies has been inspected by authorized representatives of the Owner, the Contractor and the Engineer, and found to be complete and final. The Date of Final Completion of the Project or portion thereof designated above is hereby declared.

\_\_\_\_\_  
Executed by Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Owner

\_\_\_\_\_  
Date

5.2.2 Certificate of Substantial Completion

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

This [tentative] [definitive] Certificate of Substantial Completion applies to:

All Work under the Contract Documents:       The following specified portions:

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\_\_\_\_\_  
Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

Amended Responsibilities       Not Amended

Owner's Amended Responsibilities:

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Contractor's Amended Responsibilities:

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The following documents are attached to and made part of this Certificate:

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This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

\_\_\_\_\_  
Executed by Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Owner

\_\_\_\_\_  
Date



5.2.3 Change Order Form

No. \_\_\_\_\_

Date of Issuance: \_\_\_\_\_

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

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

The Contract Documents are modified as follows upon execution of this Change Order:  
Description:

Attachments: (List documents supporting change):

**CHANGE IN CONTRACT PRICE:**  
Original Contract Price:  
\$ \_\_\_\_\_

[Increase] [Decrease] from previously approved Change Orders No. \_\_\_\_\_ to No. \_\_\_\_\_  
\$ \_\_\_\_\_

Contract Price prior to this Change Order:  
\$ \_\_\_\_\_

[Increase] [Decrease] of this Change Order:  
\$ \_\_\_\_\_

Contract Price incorporating this Change Order:  
\$ \_\_\_\_\_

**CHANGE IN CONTRACT TIMES:**  
Original Contract Times:  Working days  Calendar days  
Substantial completion (days or date): \_\_\_\_\_  
Ready for final payment (days or date): \_\_\_\_\_

[Increase] [Decrease] from previously approved Change Orders No. \_\_\_\_\_ to No. \_\_\_\_\_  
Substantial completion (days): \_\_\_\_\_  
Ready for final payment (days): \_\_\_\_\_

Contract Times prior to this Change Order:  
Substantial completion (days or date): \_\_\_\_\_  
Ready for final payment (days or date): \_\_\_\_\_

Increase] [Decrease] of this Change Order:  
Substantial completion (days or date): \_\_\_\_\_  
Ready for final payment (days or date): \_\_\_\_\_

Contract Times with all approved Change Orders:  
Substantial completion (days or date): \_\_\_\_\_  
Ready for final payment (days or date): \_\_\_\_\_

RECOMMENDED:  
By: \_\_\_\_\_  
Engineer (Authorized Signature)  
Date: \_\_\_\_\_  
Approved by Funding Agency (if applicable): \_\_\_\_\_

ACCEPTED:  
By: \_\_\_\_\_  
Owner (Authorized Signature)  
Date: \_\_\_\_\_

ACCEPTED:  
By: \_\_\_\_\_  
Contractor (Authorized Signature)  
Date: \_\_\_\_\_

5.2.4 Contractor's Application for Payment

Application for Payment No.: \_\_\_\_\_

	Application Period:	Application Date:
To (Owner): City of Wauchula	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

APPLICATION FOR PAYMENT

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY CHANGE ORDERS		

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

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

- 1. ORIGINAL CONTRACT PRICE ..... \$ \_\_\_\_\_
- 2. Net change by Change Orders..... \$ \_\_\_\_\_
- 3. CURRENT CONTRACT PRICE (Line 1 ± 2) ..... \$ \_\_\_\_\_
- 4. TOTAL COMPLETED AND STORED TO DATE  
 (Column F on Progress Estimate) ..... \$ \_\_\_\_\_
- 5. RETAINAGE:
  - a. \_\_\_\_\_ % x \$ \_\_\_\_\_ Work Completed..... \$ \_\_\_\_\_
  - b. \_\_\_\_\_ % x \$ \_\_\_\_\_ Stored Material ..... \$ \_\_\_\_\_
  - c. Total Retainage (Line 5a + Line 5b) ..... \$ \_\_\_\_\_
- 6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c) ..... \$ \_\_\_\_\_
- 7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application) ..... \$ \_\_\_\_\_
- 8. AMOUNT DUE THIS APPLICATION ..... \$ \_\_\_\_\_
- 9. BALANCE TO FINISH, PLUS RETAINAGE  
 (Column G on Progress Estimate + Line 5 above) ..... \$ \_\_\_\_\_

Payment of: \$ \_\_\_\_\_  
 (Line 8 or other - attach explanation of other amount)

is recommended by: \_\_\_\_\_ (Date)  
 (Engineer)

Payment of: \$ \_\_\_\_\_  
 (Line 8 or other - attach explanation of other amount)

is approved by: \_\_\_\_\_ (Date)  
 (Owner)

Approved by: \_\_\_\_\_ (Date)  
 Funding Agency (if applicable)

Progress Estimate

Contractor's Application

For (contract):				Application Number:				
Application Period:				Application Date:				
A		B	Work Completed		E	F		G
Item	Description	Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F) B	Balance to Finish (B - F)
Specification Section No.			From Previous Application (C + D)	This Period				
Totals								

Progress Estimate

Contractor's Application

For (contract):					Application Number:			
Application Period:					Application Date:			
A		B	Work Completed		E	F		G
Item	Description	Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F) B	Balance to Finish (B - F)
Specification Section No.			From Previous Application (C + D)	This Period				
Totals								

Progress Estimate

Contractor's Application

For (contract):					Application Number:			
Application Period:					Application Date:			
A		B	Work Completed		E	F		G
Item	Description	Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F) B	Balance to Finish (B - F)
Specification Section No.			From Previous Application (C + D)	This Period				
Totals								

5.2.5 Field Order Form

No. \_\_\_\_\_

Date of Issuance: _____		Effective Date: _____
Project: _____	Owner: City of Wauchula	Owner's Contract No.: _____
Contract: _____		Date of Contract: _____
Contractor: _____		Engineer's Project No.: _____

Attention:

You are hereby directed to promptly execute this Field Order for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: \_\_\_\_\_ (Specification Section(s))      \_\_\_\_\_ (Drawing(s) / Detail(s))

Description:

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Attachments:

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Engineer: _____	Date: _____
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Receipt Acknowledged by (Contractor): _____	Date: _____
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Copy to Owner

5.2.6 Notice of Award

Dated \_\_\_\_\_

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

Bidder:

Bidder's Address: (send Certified Mail, Return Receipt Requested)

You are notified that your Bid dated \_\_\_\_\_ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for \_\_\_\_\_

(Indicate total Work, alternates or sections or Work awarded.)

The Contract Price of your Contract is \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
\_\_\_\_\_ copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.  
\_\_\_\_\_ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within five (5) days of the date you receive this Notice of Award.

1. Deliver to the Owner fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract Security [Bonds].
3. Other conditions precedent:

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

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

\_\_\_\_\_  
City of Wauchula  
Owner  
By: \_\_\_\_\_  
Authorized Signature  
\_\_\_\_\_  
Title

Copy to Engineer

5.2.7 Notice to Proceed

Dated \_\_\_\_\_

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:
Contractor:		
Contractor's Address: (send Certified Mail, Return Receipt Requested)		

You are notified that the Contract Times under the above contract will commence to run on \_\_\_\_\_. On or before that date, you are to start performing your obligations under the Contract Documents. The date of Substantial completion is \_\_\_\_\_ and the date of readiness for final payment is \_\_\_\_\_ [(or) the number of days to achieve Substantial Completion is \_\_\_\_\_ and the number of days to achieve readiness for final payment is \_\_\_\_\_].

Before you may start any Work at the Site, you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must [add other requirements]:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contractor \_\_\_\_\_

Owner \_\_\_\_\_

Received by: \_\_\_\_\_

Given By: \_\_\_\_\_  
Authorized Signature

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Copy to Engineer



5.2.8 Payment Bond

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

---

CONTRACTOR (Name and Address): \_\_\_\_\_ SURETY (Name and Address of Principal Place of Business): \_\_\_\_\_

OWNER (Name and Address): \_\_\_\_\_

CONTRACT

Date: \_\_\_\_\_  
Amount: \_\_\_\_\_  
Description (Name and Location): \_\_\_\_\_

BOND

Bond Number: \_\_\_\_\_  
Date (Not earlier than Contract Date): \_\_\_\_\_  
Amount: \_\_\_\_\_  
Modifications to this Bond Form: \_\_\_\_\_

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

CONTRACTOR AS PRINCIPAL

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

Signature: \_\_\_\_\_ (Seal)  
Name and Title: \_\_\_\_\_

SURETY

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

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

(Space is provided below for signatures of additional parties, if required.)

Attest: \_\_\_\_\_  
Signature and Title

CONTRACTOR AS PRINCIPAL SURETY

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

Signature: \_\_\_\_\_ (Seal)  
Name and Title: \_\_\_\_\_

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

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

Attest: \_\_\_\_\_  
Signature and Title:

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
  - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
  - 2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
  - 4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2. Claimants who do not have a direct contract with Contractor:
    1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
    2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
    3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:
  - 6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
  - 6.2. Pay or arrange for payment of any undisputed amounts.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.
9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. DEFINITIONS
  - 15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
  - 15.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
  - 15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY ( <i>Name, Address and Telephone</i> ) Surety Agency or Broker: Owner's Representative ( <i>Engineer or Other Party</i> ):
---

5.2.9 Performance Bond

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

---

CONTRACTOR (*Name and Address*):

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

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

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

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

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

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

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

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

*Note: Provide execution by additional parties, such as joint venturers, if necessary.*

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
  - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
  - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
  - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
    1. Surety in accordance with the terms of the Contract; or
    2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
  - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
  - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
  - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
  - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
    1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
    2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

- 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
  - 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
  - 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
  7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
  8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
  9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.
  10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
  11. Definitions.
    - 11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
    - 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
    - 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
    - 11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY (*Name, Address and Telephone*)

Surety Agency or Broker:

Owner's Representative (*Engineer or Other Party*):

5.2.10 Work Change Directive Form

No. \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project:	Owner: City of Wauchula	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

You are directed to proceed promptly with the following change(s):

Item No.	Description

Attachments (list documents supporting change):

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

Purpose for Work Change Directive:

- Authorization for Work described herein to proceed on the basis of Cost of the Work due to:
  - Nonagreement on pricing of proposed change.
  - Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time

Estimated change in Contract Price and Contract Times:

Contract Price \$ \_\_\_\_\_ (increase/decrease)      Contract Time \_\_\_\_\_ (increase/decrease)  
days

If the change involves an increase, the estimated amounts are not to be exceeded without further authorization.

Recommended for Approval by Engineer:	Date:
Authorized for Owner by:	Date:
Accepted for Contractor by:	Date:
Approved by Funding Agency (if applicable):	Date:

DIVISION 6:  
TECHNICAL SPECIFICATIONS



## **CITY OF WAUCHULA**

**PUBLIC SERVICES DEPARTMENT**

### **SERVICE AREA 3 WATERMAIN REHABILITATION – PHASE 2**

**WAUCHULA, Florida**

### **Technical Specifications**

June 2023



CONTRACT DOCUMENTS  
TECHNICAL SPECIFICATIONS

FOR

City of Wauchula  
Service Area 3 Watermain Rehabilitation – Phase 2

June 2023

PROJECT OWNER:

City of Wauchula  
126 South 7<sup>th</sup> Avenue  
Wauchula, Florida 33873  
(863) 773-3131

PREPARED BY:

Kimley-Horn and Associates  
109 South Kentucky Avenue  
Lakeland, Florida  
(863) 226-6877  
Registry No. 696

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Jamison Tondreault, P.E. (FL Reg #84396)  
Kimley-Horn and Associates, Inc.  
109 South Kentucky Avenue  
Lakeland, Florida

# **INFRASTRUCTURE ENGINEERING STANDARD SPECIFICATIONS**

## **DIVISION 1      GENERAL REQUIREMENT**

<b>01005</b>	<b>GENERAL REQUIREMENTS</b>
<b>01010</b>	<b>SUMMARY OF WORK</b>
<b>01015</b>	<b>CONTROL OF WORK</b>
<b>01030</b>	<b>SPECIAL PROJECT PROCEDURES</b>
<b>01045</b>	<b>CUTTING AND PATCHING</b>
<b>01050</b>	<b>FIELD ENGINEERING AND SURVEYING</b>
<b>01090</b>	<b>REFERENCE STANDARDS</b>
<b>01150</b>	<b>MEASUREMENT AND PAYMENT</b>
<b>01152</b>	<b>REQUESTS FOR PAYMENT</b>
<b>01153</b>	<b>CHANGE ORDER PROCEDURES</b>
<b>01200</b>	<b>PROJECT MEETINGS</b>
<b>01310</b>	<b>CONSTRUCTION SCHEDULE &amp; PROJECT RESTRAINTS</b>
<b>01340</b>	<b>SHOP DRAWINGS, PROJECT DATA AND SAMPLES</b>
<b>01370</b>	<b>SCHEDULE OF VALUES</b>
<b>01380</b>	<b>CONSTRUCTION PHOTOGRAPHS</b>
<b>01410</b>	<b>TESTING AND TESTING LABORATORY SERVICES</b>
<b>01510</b>	<b>TEMPORARY AND PERMANENT UTILITIES</b>
<b>01570</b>	<b>TRAFFIC REGULATION</b>
<b>01580</b>	<b>PROJECT IDENTIFICATION AND SIGNS</b>
<b>01600</b>	<b>MATERIAL AND EQUIPMENT</b>
<b>01620</b>	<b>STORAGE AND PROTECTION</b>
<b>01700</b>	<b>CONTRACT CLOSEOUT</b>
<b>01710</b>	<b>CLEANING</b>
<b>01720</b>	<b>PROJECT RECORD DOCUMENTS</b>
<b>01730</b>	<b>OPERATING AND MAINTENANCE DATA</b>
<b>01740</b>	<b>WARRANTIES AND BONDS</b>

## **DIVISION 2      SITE WORK**

<b>02050</b>	<b>DEMOLITION</b>
<b>02064</b>	<b>MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT</b>
<b>02100</b>	<b>SITE PREPARATION</b>
<b>02200</b>	<b>EARTHWORK</b>
<b>02260</b>	<b>FINISH GRADING</b>
<b>02276</b>	<b>TEMPORARY EROSION AND SEDIMENTATION CONTROL</b>
<b>02485</b>	<b>SEEDING AND SODDING</b>
<b>02513</b>	<b>ASPHALT CONCRETE PAVING</b>
<b>02575</b>	<b>PAVEMENT REPAIR AND RESTORATION</b>
<b>02999</b>	<b>MISCELLANEOUS WORK AND CLEANUP</b>

**DIVISION 9      PAINTING**

09865              SURFACE PREPARATION AND SHOP PRIME PAINTING  
09900              PAINTING  
09902              PIPE AND EQUIPMENT PAINTING

**DIVISION 15      MECHANICAL**

15050              PIPE AND PIPE FITTINGS – GENERAL STATEMENT  
15062              DUCTILE IRON PIPE AND FITTINGS  
15067              PLASTIC PIPE FOR PRESSURE SERVICE  
15100              VALVES AND APPURTENANCES

## SECTION 01005

### GENERAL REQUIREMENTS

#### PART 1 GENERAL

##### 1.01 SCOPE AND INTENT

###### A. Description

The work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all work included in this Contract.

###### B. Work Included

The Contractor shall furnish all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, shop drawings, working drawings and other means of construction necessary or proper for performing and completing the work. He shall obtain and pay for all required permits necessary for the work, other than those permits such as the DEP permit and County permit which may have already been obtained. He shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the work and maintain it during and after construction, until accepted, and shall do all work and pay all incidental costs. He shall repair or restore all structures and property that may be damaged or disturbed during performance of the work.

The cost of incidental work described in these General Requirements, for which there are no specific Contract Items, shall be considered as part of the general cost of doing the work and shall be included in the prices for the various Contract Items. No additional payment will be made.

The Contractor shall be solely responsible for the adequacy of his workmanship, materials and equipment.

###### C. Public Utility Installations and Structures

Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes and all other appurtenances and facilities pertaining thereto.

The Contractor shall protect all installations and structures from damage during the work. Access across any buried public utility installation or structure shall be made only in such locations and by means approved by the Engineer. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor which are shown on the Plans or have been located in the field by the utility shall be repaired by the Contractor, at his expense, as approved by the Engineer. No separate payment shall be made for such protection or repairs to public utility installations or structures.

Public utility installations or structures owned or controlled by the Owner or other governmental body, which are required by this contract to be removed, relocated, replaced or rebuilt by the Contractor not identified in any separate bid item shall be considered as a part of the general cost of doing the work and shall be included in the prices bid for the various contract items. No separate payment shall be made.

Where public utility installations or structures owned or controlled by the Owner or other governmental body are encountered during the course of the work, and are not indicated on the Plans or in the Specifications, and when, in the opinion of the Owner, removal, relocation, replacement or rebuilding is necessary to complete the work under this Contract, such work shall be accomplished by the utility having jurisdiction, or such work may be ordered, in writing by the Owner, for the contractor to accomplish. If such work is accomplished by the utility having jurisdiction, it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement or rebuilding as required. If such work is accomplished by the Contractor, it will be in accordance with the General and Supplemental General Conditions.

The Contractor shall give written notice to Owner and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least forty-eight hours in advance of breaking ground in any area or on any unit of the work. This can be accomplished by making the appropriate contact with the "Sunshine State One-Call of Florida, Inc. Call Center ("Call Sunshine") and per all requirements provided for in the Florida Underground Facilities Damage Prevention and Safety Act (Florida Statutes, Title XXXIII, Chapter 556).

The maintenance, repair, removal, relocation or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the Engineer.

## **1.02 PLANS AND SPECIFICATIONS**

### **A. Plans**

When obtaining data and information from the Plans, figures shall be used in preference to scaled dimensions, and large scale drawings in preference to small scale drawings.

### **B. Copies Furnished to Contractor**

The Contractor shall furnish each of the subcontractors, manufacturers, and material men such copies of the Contract Documents as may be required for their work. Additional copies of the Plans and Specifications, when requested, may be furnished to the Contractor at cost of reproduction.

### **C. Supplementary Drawings**

When, in the opinion of the Engineer, it becomes necessary to explain more fully the work to be done or to illustrate the work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer and five paper prints thereof will be given to the Contractor.

D. Contractor to Check Plans and Data

The Contractor shall verify all dimensions, quantities and details shown on the Plans, Supplementary Drawings, Schedules, Specifications or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or 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 conditions at his own expense. He will not be allowed to take advantage of any errors or omissions, as full instructions will be furnished by the Engineer, should such errors or omissions be discovered. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

E. Specifications

The Technical Specifications consist of three parts: General, Products and Execution. The General Section contains General Requirements which govern the work. Products and Execution modify and supplement these by detailed requirements for the work and shall always govern whenever there appears to be a conflict.

F. Intent

All work called for in the Specifications applicable to this Contract, but not shown on the Plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications, but involved in carrying out their intent or in the complete and proper execution of the work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

The inclusion of the Related Requirements (or work specified elsewhere) in the General part of the specifications is only for the convenience of the Contractor, and shall not be interpreted as a complete list of related Specification Sections.

**1.03 MATERIALS AND EQUIPMENT**

A. Manufacturer

The names of proposed manufacturers, material men, suppliers and dealers who are to furnish materials, fixtures, equipment, appliances or other fittings shall be submitted to the Engineer for approval. Such approval must be obtained before shop drawings will be checked. No manufacturer will be approved for any materials to be furnished under this Contract unless he shall be of good reputation and have a plant of ample capacity. He shall, upon the request of the Engineer, be required to submit evidence that he has

manufactured a similar product to the one specified and that it has been previously used for a like purpose for a sufficient length of time to demonstrate its satisfactory performance.

All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request, in writing to the Engineer, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.

Any two or more pieces or material or equipment of the same kind, type or classification, and being used for identical types of services, shall be made by the same manufacturer.

B. Delivery

The Contractor shall deliver materials in ample quantities to insure the most speedy and uninterrupted progress of the work so as to complete the work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the work of any related Contractor.

C. Tools and Accessories

The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind or size of equipment, one complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.

Spare parts shall be furnished as specified.

Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight and principal rating data.

D. Installation of Equipment.

The Contractor shall have on hand sufficient proper equipment and machinery of ample capacity to facilitate the work and to handle all emergencies normally encountered in work of this character.

Equipment shall be erected in a neat and workmanlike manner on the foundations at the locations and elevations shown on the Plans, unless directed otherwise by the Engineer during installation. All equipment shall be correctly aligned, leveled and adjusted for satisfactory operation and shall be installed so that proper and necessary connections can be made readily between the various units.

The Contractor shall furnish, install and protect all necessary anchor and attachment bolts and all other appurtenances needed for the installation of the devices included in the equipment specified. Anchor bolts shall be as approved by the Engineer and made of ample size and strength for the purpose intended. Substantial templates and working drawings for installation shall be furnished.

The Contractor shall furnish all materials and labor for, and shall properly bed in non-shrink grout, each piece of equipment on its supporting base that rests on masonry foundations.

Grout shall completely fill the space between the equipment base and the foundation. All metal surfaces coming in contact with concrete or grout shall receive a coat of coal tar epoxy equal to Koppers 300M or provide a 1/32-inch neophrene gasket between the metal surface and the concrete or grout.

E. Service of Manufacturer's Engineer

The Contract prices for equipment shall include the cost of furnishing (as required by equipment specifications sections) a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test and place in operation the equipment in conformity with the Contract Documents. After the equipment is placed in permanent operation by the Owner, such engineer or superintendent shall make all adjustments and tests required by the Engineer to prove that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the Owner in the proper operation and maintenance of such equipment.

**1.04 INSPECTION AND TESTING**

A. General

Inspection and testing of materials will be performed by the Owner unless otherwise specified.

For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. Three (3) copies of the reports shall be submitted and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.

If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract, the Contractor will be notified thereof and he will be directed to refrain from delivering said material or equipment, or to remove it promptly from the site or from the work and replace it with acceptable material, without cost to the Owner.

Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.

The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Owner formally takes over the operation thereof.

B. Costs



All inspection and testing of materials furnished under this Contract will be performed by the Owner or duly authorized inspection engineers or inspections bureaus without cost to the Contractor, unless otherwise expressly specified.

The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor and such costs shall be deemed to be included in the Contract price.

Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the Owner for compliance. The Contractor shall reimburse the Owner for the expenditures incurred in making such tests on materials and equipment which are rejected for non-compliance.

C. Inspections of Materials

The Contractor shall give notice in writing to the Engineer, at least two weeks in advance of his intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice, the Engineer will arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials or he will notify the Contractor that the inspection will be made at a point other than the point of manufacture, or he will notify the Contractor that inspection will be waived. The Contractor must comply with these provisions before shipping any material. Such inspection shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Documents.

D. Certificate of Manufacture

When inspection is waived or when the Engineer so requires, the Contractor shall furnish to him authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

E. Shop Tests of Operating Equipment

Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. No such equipment shall be shipped to the work until the Engineer notifies the Contractor, in writing, that the results of such tests are acceptable.

The cost of shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

F. Preliminary Field Tests

As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make preliminary field tests of equipment. If the preliminary field tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to the acceptance tests, make all changes, adjustments and replacements required. The furnishing Contractor shall assist in the preliminary field tests as applicable.

G. Final Field Tests

Upon completion of the work and prior to final payment, all equipment and piping installed under this Contract shall be subjected to acceptance tests as specified or required to prove compliance with the Contract Documents.

The Contractor shall furnish labor, fuel, energy, water and all other materials, equipment and instruments necessary for all acceptance tests, at no additional cost to the Owner. The Supplier shall assist in the final field tests as applicable.

H. Failure of Tests

Any defects in the materials and equipment or their failure to meet the tests, guarantees or requirements of the Contract Documents shall be promptly corrected by the Contractor. The decision of the Engineer as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive. If the Contractor fails to make these corrections or if the improved materials and equipment, when tested, shall again fail to meet the guarantees of specified requirements, the Owner, notwithstanding its partial payment for work, and materials and equipment, may reject the materials and equipment and may order the Contractor to remove them from the site at his own expense.

In case the Owner rejects any materials and equipment, then the Contractor shall replace the rejected materials and equipment within a reasonable time. If he fails to do so, the Owner may, after the expiration of a period of thirty (30) calendar days after giving him notice in writing, proceed to replace such rejected materials and equipment, and the cost thereof shall be deducted from any compensation due or which may become due the Contractor under his Contract.

I. Final Inspection

During such final inspections, the work shall be clean and free from water. In no case will the final pay application be prepared until the Contractor has complied with all requirements set forth and the Engineer has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Document.

**1.05 TEMPORARY STRUCTURES**

A. Temporary Fences

If, during the course of the work, it is necessary to remove or disturb any fence or part thereof, the Contractor shall, at his own expense, if so ordered by the Engineer, provide a

suitable temporary fence which shall be maintained until the permanent fence is replaced. The Engineer shall be solely responsible for the determination of the necessity for providing a temporary fence and the type of temporary fence to be used.

## **1.06 TEMPORARY SERVICES**

### **A. First Aid**

The Contractor shall keep upon the site, at each location where work is in progress, a completely equipped first aid kit and shall provide ready access thereto at all times when people are employed on the work.

## **1.07 LINES AND GRADES**

### **A. Grade**

All work under this Contract shall be constructed in accordance with the lines and grades shown on the Plans, or as given by the Owner/Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

### **B. Safeguarding Marks**

The Contractor shall safeguard all points, stakes, grade marks, monuments and bench marks made or established on the work, bear the cost of reestablishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or removing without authorization such established points, stakes and marks.

The Contractor shall safeguard all existing and known property corners, monuments and marks adjacent to but not related to the work and, if required, shall bear the cost of reestablishing them if disturbed or destroyed.

### **C. Datum Plane**

All elevations indicated or specified refer to the Mean Sea Level Datum of the NGVD 1929.

## **1.08 ADJACENT STRUCTURES AND LANDSCAPING**

### **A. Responsibility**

The Contractor shall also be entirely responsible and liable for all damage or injury as a result of his operations to all other adjacent public and private property, structures of any kind and appurtenances thereto met with during the progress of the work. The cost of protection, replacement in their original locations and conditions or payment of damages for injuries to such adjacent public and private property and structures affected by the work, whether or not shown on the Plans, and the removal, relocation and reconstruction of such items called for on the Plans or specified shall be included in the various Contract Items and no separate payments will be made therefore. Where such public and private property, structures of any kind and appurtenances thereto are not shown on the Plans and when, in the opinion of the Engineer, additional work is deemed necessary to avoid

interference with the work, payment therefore will be made as provided for in the General Conditions.

Contractor is expressly advised that the protection of buildings, structures, tunnels, tanks, pipelines, etc. and related work adjacent and in the vicinity of his operations, wherever they may be, is solely his responsibility. Conditional inspection of buildings or structures in the immediate vicinity of the project which may reasonably be expected to be affected by the Work shall be performed by and be the responsibility of the Contractor.

Contractor shall, before starting operations, make an examination of the interior and exterior of the adjacent structures, buildings, facilities, etc., and record by notes, measurements, photographs, etc., conditions which might be aggravated by open excavation and construction. Repairs or replacement of all conditions disturbed by the construction shall be made to the satisfaction of the Engineer. This does not preclude conforming to the requirements of the insurance underwriters. Copies of surveys, photographs, reports, etc., shall be given to the Engineer.

Prior to the beginning of any excavations, the Contractor shall advise the Owner of all buildings or structures on which he intends to perform work or which performance of the project work will affect.

B. Protection of Trees

1. All trees and shrubs shall be adequately protected by the Contractor with boxes and otherwise and in accordance with ordinances governing the protection of trees. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by him with new stock of similar size and age, at the proper season and at the sole expense of the Contractor.
2. Beneath trees or other surface structures, where possible, pipelines may be built in short tunnels, backfilled with excavated materials, except as otherwise specified, or the trees or structures carefully supported and protected from damage.
3. The Owner may order the Contractor, for the convenience of the Owner, to remove trees along the line or trench excavation. If so ordered, the Owner will obtain any permits required for removal of trees. Such tree removal ordered shall be paid for under the appropriate Contract Items.

C. Lawn Areas

Lawn areas shall be left in as good condition as before the starting of the work. Where sod is to be removed, it shall be carefully removed, and later replaced, or the area where sod has been removed shall be restored with new sod.

D. Restoration of Fences

Any fence, or part thereof, that is damaged or removed during the course of the work shall be replaced or repaired by the Contractor and shall be left in as good a condition as before the starting of the work. The manner in which the fence is repaired or replaced and the materials used in such work shall be subject to the approval of the Engineer. The cost of all labor, materials, equipment, and work for the replacement or repair of any fence shall be deemed included in the appropriate Contract Item or items, or if no specific Item is

provided therefore, as part of the overhead cost of the work, and no additional payment will be made therefore.

## **1.09 PROTECTION OF WORK AND PUBLIC**

### **A. Barriers and Lights**

During the prosecution of the work, the Contractor shall put up and maintain at all times such barriers and lights as will effectually prevent accidents. The Contractor shall provide suitable barricades, red lights, "danger" or "caution" or "street closed" signs and watchmen at all places where the work causes obstructions to the normal traffic or constitutes in any way a hazard to the public, in accordance with state and local requirements.

### **B. Smoke Prevention**

A strict compliance with ordinances regulating the production and emission of smoke will be required. No open fires will be permitted.

### **C. Noise**

The Contractor shall eliminate noise to as great an extent as practicable at all times. Air compressing plants shall be equipped with silencers and the exhaust of all engines or other power equipment shall be provided with mufflers. In the vicinity of hospitals and schools, special care shall be used to avoid noise or other nuisances. The Contractor shall strictly observe all local regulations and ordinances covering noise control.

### **D. Access to Public Services**

Neither the materials excavated nor the materials or plant used in the construction of the work shall be so placed as to prevent free access to all fire hydrants, valves or manholes.

### **E. Dust prevention**

The Contractor shall prevent dust nuisance from his operations or from traffic by keeping the roads and/or construction areas sprinkled with water at all times.

## **1.10 CUTTING AND PATCHING**

The Contractor shall do all cutting, fitting or patching of his portion of the work that may be required to make the several parts thereof join and coordinate in a manner satisfactory to the Engineer and in accordance with the Plans and Specifications. The work must be done by competent workmen skilled in the trade required by the restoration.

## **1.11 CLEANING**

### **A. During Construction**

During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the Engineer, such material, debris, or rubbish constitutes a nuisance or is objectionable. The Contractor shall

remove from the site all of his surplus materials and temporary structures when no further need therefore develops.

B. Final Cleaning

At the conclusion of the work, all equipment, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and he shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances.

The Contractor shall thoroughly clean all equipment and materials installed by him and shall deliver such materials and equipment undamaged in a bright, clean, polished and new operating condition.

**1.12 MISCELLANEOUS**

A. Protection Against Siltation and Bank Erosion

1. The Contractor shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed water courses and drainage ditches.
2. The Contractor, at his own expense, shall remove any siltation deposits and correct any erosion problems as directed by the Engineer which results from his construction operations.

B. Protection of Wetland Areas

1. The Contractor shall properly dispose of all surplus material, including soil, in accordance with Local, State and Federal regulations. Under no circumstances shall surplus material be disposed of in wetland areas as defined by the Florida Department of Environmental Protection or Southwest Florida Water Management District.

C. Existing Facilities

The work shall be so conducted to maintain existing facilities in operation insofar as is possible. Requirements and schedules of operations for maintaining existing facilities in service during construction shall be as described in the Special Provisions.

D. Use of Chemicals

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01010

### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.01 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

- A. The work included, but is not limited to, in this contract consists of the following:
  - 1. Replacement of existing water mains with various sizes of PVC pipe and installation of new 6" or 8" PVC water main or 8" or 10" HDPE water main. Work also includes installation of any valves, linestops, service connections, grout and abandonment of existing mains, restoration, maintenance of traffic, and hydrants and replacement of concrete driveways and pavement associated with the proposed water main.
- B. The Contractor shall furnish all shop drawings, working drawings, labor, materials, equipment, tools, services and incidentals necessary to complete all work required by these Specifications and as shown on the Contract Drawings.
- C. The Contractor shall perform the work complete, in place and ready for continuous service and shall include any repairs, replacements, and/or restoration required as a result of damages caused prior to acceptance by the Owner.
- D. The Contractor shall furnish and install all materials, equipment and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.

##### 1.02 CONTRACTS

Construct all the Work under a single contract.

##### 1.03 WORK SEQUENCE

- A. Watermain Replacement:
  - 1. Install proposed watermain piping while keeping the existing watermain and service lines in operation. Maintain the minimum separation and clearances from existing piping shown in the plans. Plug and abandon existing watermain once proposed watermain has been constructed and cleared for service. Remove and salvage existing hydrants that are not in use.
  - 2. Contractor to submit and obtain approval prior to commencing construction:
    - a. Work plan and schedule for order of pipeline installation and restoration.
    - b. Sequence of testing and activation of new pipelines to minimize service outages.
    - c. Method of informing public of project impacts.
- B. All work done under this Contract shall be done with a minimum of inconvenience to the



users of the system or facility.

- C. The Contractor shall, if necessary and feasible, construct the work in stages to accommodate the Owner's use of the premises during the construction period; coordinate the construction schedule and operations with the Owner's Representative.
- D. The Contractor shall, where feasible, construct the Work in stages to provide for public convenience and not close off public use of any facility until completion of construction to provide alternative usage.

#### **1.04 CONSTRUCTION AREAS**

- A. The Contractor shall: Limit his use of the construction areas for work and for storage, to allow for:
  - 1. Work by other Contractors.
  - 2. Owner's Use.
  - 3. Public Use.
- B. Coordinate use of work site under direction of Owner's Representative.
- C. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.
- D. Move any stored products under the Contractor's control, which interfere with operations of the Owner or separate contractor.
- E. Obtain and pay for the use of additional storage of work areas needed for Contractor operations.

#### **1.05 OWNER OCCUPANCY**

- A. It is assumed that portions of the Work will be completed prior to completion of the entire Work. Upon completion of construction of each individual facility, including testing, if the Owner, at its sole discretion, desires to accept the individual facility, the Contractor will be issued a dated certificate of completion and acceptance for each individual facility. The Owner will assume ownership and begin operation of the individual facility on that date and the three-year guaranty period shall commence on that date. The Owner has the option of not accepting the entire work as a whole until it is completed, tested and approved by the Owner.

#### **1.06 PARTIAL OWNER OCCUPANCY**

The Contractor shall schedule his operations for completion of portions of the Work, as designated, for the Owner's occupancy prior to substantial completion of the entire work.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

END OF SECTION

## SECTION 01015

### CONTROL OF WORK

#### PART 1 GENERAL

##### 1.01 WORK PROGRESS

The Contractor shall furnish personnel and equipment which will be efficient, appropriate and adequately sized to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the Contract. If at any time such personnel appears to the Engineer to be inefficient, inappropriate, or insufficient for securing the quality of work required for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character, or increase the personnel and equipment and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

##### 1.02 PRIVATE LAND

The Contractor shall not enter or occupy private land outside of easements, except by permission of the affected property owner.

##### 1.03 WORK LOCATIONS

Work shall be located substantially as indicated on the drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

##### 1.04 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open trench, prohibiting stacking excavated material in the street and requiring that the trench shall not remain open overnight.
- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be barricaded and well lighted at all times when construction is not in progress.

##### 1.05 DISTRIBUTION SYSTEMS AND SERVICES

- A. The Contractor shall avoid interruptions to water, telephone, cable TV, sewer, gas, or other related utility services. He shall notify the Engineer and the appropriate agency well

in advance of any requirement for dewatering, isolating, or relocating a section of a utility, so that necessary arrangements may be made.

- B. If it appears that utility service will be interrupted for an extended period, the Engineer may order the Contractor to provide temporary service lines at the Contractor's expense. Inconvenience of the users shall be kept to the minimum, consistent with existing conditions. The safety and integrity of the systems are of prime importance in scheduling work.

#### **1.06 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES**

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures and utilities, public or private, including poles, signs, services to building utilities, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables and other similar facilities, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operation shall be repaired by the Contractor at his expense.
- B. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines and sewers). Services to buildings shall be maintained and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit prices established in the Bid.
- D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the Owner is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work as classified in the General Conditions. If relocation of a privately owned utility is required, the Owner will notify the utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Owner and utility and shall have no claim for delay due to such relocation. The Contractor shall notify public utility companies in writing at least 48 hours (excluding Saturdays, Sundays and legal holidays) before excavating near their utilities.

#### **1.07 TEST PITS**

Test pits for the purpose of locating underground pipeline or structures in advance of the construction shall be excavated and backfilled by the Contractor immediately after the utility location and the surface shall be restored in a manner equal or better than the original condition. No separate payment will be made.

#### **1.08 CARE AND PROTECTION OF PROPERTY**

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor,

such property shall be restored by the Contractor, at his expense, to a condition equal or better to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Engineer.

- B. All sidewalks which are disturbed by the Contractor's operations shall be restored to their original or better condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.
- C. Along the location of this work, all fences, walks, bushes, trees, shrubbery and other physical features shall be protected and restored in a thoroughly workmanlike manner unless otherwise shown on the drawings. Fences and other features removed by the Contractor shall be replaced in the location indicated by the Engineer as soon as conditions permit. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regarded and sodded to equal or exceed original conditions.
- D. Trees close to the work which drawings do not specify to be removed, shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are liable to damage because of his operations, but in no case shall any tree be cut or removed without prior notification to the Engineer. All injuries to bark, trunk, limbs and roots of trees shall be repaired by dressing, cutting and painting according to approved methods, using only approved tools and materials.
- E. The protection, removal and replacement of existing physical features along the line of work shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the Bid.

#### **1.09 MAINTENANCE OF TRAFFIC**

- A. Open pits, trenches, unpaved streets, debris, or other obstructions due to construction that will prevent the normal flow of traffic during an extended construction stoppage, for any reason, shall be minimized. In the event an extended construction stoppage is found to be necessary, Contractor shall, at his own expense, provide normal traffic flow during extended construction stoppage. Extended stoppage will be defined by the Engineer.
- B. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operations cause traffic hazards, he shall repair the road surface, provide temporary roadways, erect wheel guards or fences, or take other safety measures which are satisfactory to the Owner.
- C. Any changes to the traffic pattern require a Traffic Control Plan as detailed in section 01570 of this specification.

#### **1.10 WATER FOR CONSTRUCTION PURPOSES**

- A. In locations where public water supply is available, the Contractor may purchase water for all construction purposes.
- B. The Contractor shall be responsible for paying for all water tap fees incurred for the

purpose of obtaining a potable water service or temporary use meter.

**1.11 MAINTENANCE OF FLOW**

The Contractor shall at his own cost, provide for the flow of sewers, drains and water courses interrupted during the progress of the work and shall immediately cart away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.

**1.12 CLEANUP**

During the course of the work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of all residue resulting from the construction work and at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and shall leave the entire site of the work in a neat and orderly condition.

**1.13 COOPERATION WITHIN THIS CONTRACT**

- A. All firms or person authorized to perform any work under this Contract shall cooperate with the General Contractor and his subcontractors or trades and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

**1.14 PROTECTION OF CONSTRUCTION AND EQUIPMENT**

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

**1.15 CONSTRUCTION WITHIN RIGHT-OF-WAY**

Where pipe lines are installed within FDOT right-of-way, all excavation backfill and compaction for the purpose of reconstructing roadways and/or adjacent slopes contiguous thereto shall be in accordance with FDOT or these Specifications, whichever is applicable. Contractor shall satisfy the authorized representative of the FDOT with respect to proper safety procedures, construction methods, required permitting, etc., within the FDOT right-of-way.

Where pipe lines are installed within County right-of-way, all excavation backfill and compaction for the purpose of reconstructing roadways and/or adjacent slopes contiguous thereto shall be in accordance with County or these Specifications, whichever is applicable. Contractor shall satisfy the authorized representative of the County with respect to proper safety procedures, construction methods, required permitting, etc., within the County right-of-way.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01030

### SPECIAL PROJECT PROCEDURES

#### **PART 1 GENERAL**

##### **1.01 PERMITS**

Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the Owner to do the work from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies delivered to the Engineer. The costs for obtaining all permits shall be borne by the Contractor.

##### **1.02 CONNECTIONS TO EXISTING SYSTEM**

The Contractor shall perform all work necessary to locate, excavate and prepare for connections to the existing systems all as shown on the Drawings or where directed by the Owner/Engineer. The cost for this work and for the actual connection shall be included in the price bid for the project and shall not result in any additional cost to the Owner. The termination point for each contract shall be as shown on the Contract Drawings.

##### **1.03 RELOCATIONS**

The Contractor shall be responsible for the coordination of the relocation of structures, including but not limited to light poles, power poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. No relocation of the items under this Contract shall be done without approval from the Engineer.

##### **1.04 EXISTING UNDERGROUND PIPING, STRUCTURES AND UTILITIES**

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines as to avoid damage to the existing lines.
- B. It is the responsibility of the Contractor to ensure that all utility or other poles, the stability of which may be endangered by the close proximity of excavation, are temporarily stayed in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice.
- C. The existing utility locations are shown without express or implied representation, assurance, or guarantee that they are complete or correct or that they represent a true picture of underground piping to be encountered. The Contractor shall be responsible for notifying the various utility companies to locate their respective utilities in advance of construction in conformance with all requirements provided for in the Florida Underground Facilities Damage Prevention and Safety Act (Florida Statutes, Title XXXIII, Chapter 556).

- D. The existing piping and utilities that interfere with new construction shall be rerouted as shown, specified, or required. Before any piping and utilities not shown on the Drawings are disturbed, the Contractor shall notify the Engineer and shall provide suggestions on how best to resolve the issue.
- E. The Contractor shall exercise care in any excavation to locate all existing piping and utilities. All utilities which do not interfere with complete work shall be carefully protected against damage. Any existing utilities damaged in any way by the Contractor shall be restored or replaced by the Contractor at his expense as directed by the Engineer.
- F. It is intended that wherever existing utilities such as water, sewer, gas, telephone, electrical, or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated in the Drawings. However, when in the opinion of the Engineer this procedure is not feasible, he may direct the use of fittings for a utilities crossing as detailed on the Drawings. No deflections will be allowed in gravity sanitary sewer lines or in existing storm sewer lines.

**1.05 SUSPENSION OF WORK DUE TO WEATHER**

Refer to FDOT Standards and Specifications Book, Section 8.

**1.06 HURRICANE PREPAREDNESS PLAN**

- A. Within 30 days of the date of Notice to Proceed, the Contractor shall submit to the Engineer and Owner a Hurricane Preparedness Plan. The plan should outline the necessary measures which the Contractor proposes to perform at no additional cost to the Owner in case of a hurricane warning.
- B. In the event of inclement weather, or whenever Engineer shall direct, Contractor shall insure that he and his Subcontractors shall carefully protect work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any portion of work or materials is damaged due to the failure on the part of the Contractor or Subcontractors to protect the work, such work and materials shall be removed and replaced at the expense of the Contractor.

**1.07 POWER SUPPLY**

Electricity as may be required for construction and permanent power supply shall be secured and purchased by the Contractor.

**1.08 SALVAGE**

Any existing equipment or material, including, but not limited to, valves, pipes, fittings, couplings, hydrants, etc., which are removed or replaced as a result of construction under this project may be designated as salvage by the Engineer/Owner and if so shall be protected for a reasonable time until picked up by the Owner. Any equipment or material not worthy of salvaging, as directed by the Engineer/Owner, shall be disposed of by the Contractor at no additional cost.

**1.09 DEWATERING**

- A. The Contractor shall do all groundwater pumping necessary to prevent flotation of any part of the work during construction operations with his own equipment.
- B. The Contractor shall pump out water and wastewater which may seep or leak into the excavations for the duration of the Contract and with his own equipment. He shall dispose of this water in an appropriate manner.

**1.10 ADDITIONAL PROVISIONS**

- A. Before commencing work on any of the existing pipelines, structures or equipment, the Contractor shall notify the Engineer, in writing, at least 10 calendar days in advance of the date he proposes to commence such work.
- B. The Contractor shall provide, at his own expense, all necessary temporary facilities for access to and for protection of, all existing facilities. The Owner's personnel must have ready access at all times to the existing facilities. The Contractor is responsible for all damage to existing structures, equipment and facilities caused by his construction operations and must repair all such damage when and as ordered by the Engineer.

**1.11 CONSTRUCTION CONDITIONS**

The Contractor shall strictly adhere to the specific requirements of the governmental unit(s) and/or agency(ies) having jurisdiction over the work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

**1.12 PUBLIC NUISANCE**

- A. The Contractor shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, excessive noise or dust.
- B. Sound levels must meet City of Wauchula's noise control ordinance. Sound levels in excess of such ordinance are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the Owner for excessive noise shall not relieve the Contractor of the other portions of this specification.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

**1.13 WARRANTIES**

- A. All material supplied under these Specifications shall be warranted by the Contractor and the manufacturers for a period of three (3) years. Warranty period shall commence on the date of Owner acceptance.
- B. The material shall be warranted to be free from defects in workmanship, design and materials. If any part of the system should fail during the warranty period, it shall be replaced at no expense to the Owner.

- C. The manufacturer's warranty period shall run concurrently with the Contractor's warranty or guarantee period. No exception to this provision shall be allowed. The Contractor shall be responsible for obtaining warranties from each of the respective suppliers or manufacturers for all the material specified under these contract specifications,
- D. In the event that the manufacturer is unwilling to provide a three-year warranty commencing at the time of Owner acceptance, the Contractor shall obtain from the manufacturer a four (4) year warranty starting at the time of equipment delivery to the job site. This four-year warranty shall not relieve the Contractor of the three-year warranty starting at the time of Owner acceptance of the equipment.

**1.14 FUEL STORAGE & FILLING**

- A. If the contractor is storing fuel on site, or doing his own fuel filling of portable equipment (other than hand-held equipment), he is responsible for any required response, clean-up or reporting required, at no additional cost to the Owner.
- B. The Contractor shall prepare and submit a fuel storage / spill abatement plan prior to start of construction if required.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01045

### CUTTING AND PATCHING

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

- A. The Contractor shall be responsible for all cutting, fitting and patching, including excavation and backfill, required to complete the work or to:
1. Make its several parts fit together properly.
  2. Uncover portions of the work to provide for installation of ill-timed work.
  3. Remove and replace defective work.
  4. Remove and replace work not conforming to requirements of Contract Documents.
  5. Provide penetrations of non-structural surfaces for installation of piping and electrical conduit.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

Comply with specifications and standards for each specific product involved.

#### **PART 3 EXECUTION**

##### **3.01 INSPECTION**

- A. Inspect existing conditions of project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions to Engineer. Do not proceed with work until Engineer has provided further instructions.

##### **3.02 PREPARATION**

- A. Provide adequate temporary support as necessary to assure structural value to integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of project from damage.
- C. Provide protection from elements for that portion of the project which may be exposed by cutting and patching work and maintain excavations free from water.

**3.03****PERFORMANCE**

- A. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Fit and adjust products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- D. Restore work which has been cut or removed; install new products to provide completed work in accordance with the requirements of the Contract Documents.
- E. Replace surfaces airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes.

**END OF SECTION**

## SECTION 01050

### FIELD ENGINEERING AND SURVEYING

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

A. The Contractor shall provide and pay for field surveying service required for the project.

B. The Contractor shall furnish and set all necessary stakes to establish the lines and grades as shown on the Contract Drawings and layout each portion of the Work of the Contract.

##### 1.02 QUALIFICATION OF SURVEYOR AND ENGINEER

All construction staking shall be conducted by or under the supervision of a Florida Registered Professional Surveyor and Mapper. The Contractor shall be responsible for the layout of all such lines and grades, which will be subject to verification by the Engineer.

##### 1.03 SURVEY REFERENCE POINTS

A. Existing basic horizontal and vertical control points for the Project are designated on the Contract Drawings.

B. Locate and protect all survey monumentation, property corners and project control points prior to starting work and preserve all permanent reference points during construction. All costs associated with the replacement of all survey monumentation, property corners and project control points shall be borne by the Contractor.

Make no changes or relocations without prior written notice to Engineer.

Report to Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.

Require surveyor to replace project control points which may be lost or destroyed.

Establish replacements based on original survey control.

##### 1.04 PROJECT SURVEY REQUIREMENTS

The Contractor shall establish temporary bench marks as needed, referenced to data established by survey control points.

##### 1.05 RECORDS

The Contractor shall employ a Professional Engineer or Surveyor registered in the State of Florida to verify survey data and properly prepare record drawings per Section 01720.

**PART 2      PRODUCTS (NOT USED)**



**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01090

### REFERENCE STANDARDS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS

Abbreviations and acronyms used in Contract Documents to identify reference standards.

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes established stricter standards.
- B. Publication Date: The most recent publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

##### 1.03 ABBREVIATIONS, NAMES AND ADDRESSES OR ORGANIZATIONS

Obtain copies of reference standards direct from publication source, when needed for proper performance of work, or when required for submittal by Contract Documents.

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AASHTO	American Association of State Highway and Transportation Officials 444 North Capital Street, N.W. Washington, DC 20001
ACI	American Concrete Institute Box 19150 Reford Station Detroit, MI 48219
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AISC	American Institute of Steel Construction 1221 Avenue of the Americas New York, NY 10020
AISI	American Iron and Steel Institute 1000 16th Street NW Washington, DC 20036
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018

ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
AWS	American Welding Society 2501 N.W. 7th Street Miami, FL 33125
CRSI	Concrete Reinforcing Steel Institute 180 North LaSalle Street, Suite 2110 Chicago, IL 60601
FDEP	Florida Department of Environmental Protection 3900 Commonwealth Blvd. Tallahassee, Florida 32399
FDOT	Florida Department of Transportation Standards Specifications for Road and Bridge Construction Maps & Publication Sales - Mail Station 12 605 Suwannee St. Tallahassee, FL 32399-0450
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, DC 20407
MLSFA	Metal Lath/Steel Framing Association 221 North LaSalle Street Chicago, IL 60601
MMA	Monorail Manufacturer's Association 1326 Freeport Road Pittsburgh, PA 15238
NAAMM	National Association of Architectural Metal Manufacturers

221 North LaSalle Street  
Chicago, IL 60601

- NEMA National Electrical Manufacturer's Assoc.  
2101 L Street N.W.  
Washington, DC 20037
- OHSA Occupational Safety and Health Assoc.  
5807 Breckenridge Pkwy., Suite A  
Tampa, FL 33610-4249
- PCA Portland Cement Association  
5420 Old Orchard Road  
Skokie, IL 20076
- PCI Prestressed Concrete Institute  
20 North Wacker Drive  
Chicago, IL 60606
- SDI Steel Door Institute  
712 Lakewood Center North  
Cleveland, OH 44107
- SMACNA Sheet Metal and Air Conditioning Contractor's National Association  
8224 Old Court House Road  
Vienna, VA 22180
- SSPC Steel Structures Painting Council  
402 24<sup>th</sup> Street, Suite 600  
Pittsburgh, PA 15213
- SWFWMD Southwest Florida Water Management District  
2379 Broad Street  
Brooksville, FL 34604-6899
- UL Underwriter's Laboratories, Inc.  
333 Pfingston Road  
Northbrook, IL 60062

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01150

### MEASUREMENT AND PAYMENT

#### PART 1 GENERAL

##### 1.01 SCOPE

- A. The scope of this section of the Contract Documents is to further define the items included in each Bid Item in the Bid Form section of the Contract Documents. Payment will be made based on the specified items included in the description in this section for each bid item.
- B. All contract prices included in the Bid Form section will be full compensation for all shop drawings, working drawings, labor, materials, tools, equipment and incidentals necessary to complete the construction as shown on the Drawings and/or as specified in the Contract Documents to be performed under this Contract. Actual quantities of each item bid on a unit price basis will be determined upon completion of the construction in the manner set up for each item in this section of the Specifications. Payment for all items listed in the Bid Form will constitute full compensation for all work shown and/or specified to be performed under this Contract.

##### 1.02 ESTIMATED QUANTITIES

The quantities shown are approximate and are given only as a basis of calculation upon which the award of the Contract is to be made. The Owner/Engineer does not assume any responsibility for the final quantities, nor shall the Contractor claim misunderstanding because of such estimate of quantities. Final payment will be made only for satisfactorily completed quantity of each item.

##### 1.03 WORK OUTSIDE AUTHORIZED LIMITS

No payment will be made for work constructed outside the authorized limits of work.

##### 1.04 MEASUREMENT STANDARDS

Unless otherwise specified for the particular items involved, all measurements of distance shall be taken horizontally or vertically.

##### 1.05 AREA MEASUREMENTS

In the measurement of items to be paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the final dimensions measured along the surface of the completed work within the neat lines shown or designated.

##### 1.06 LUMP SUM ITEMS

Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum items. Lump sum contracts shall be complete, tested and fully operable prior to request for final payment. Contractor may be required to provide a break-down of the lump sum totals.

**1.07****UNIT PRICE ITEM**

Separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the work shall be considered to be included in the scope of the appropriate listed work items.

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work. Final payments shall not be requested by the Contractor or made by the Owner until as-built (record) drawings have been submitted and approved by the Engineer.

1. Shop Drawings, Working Drawings.
2. Clearing, grubbing and grading except as hereinafter specified.
3. Trench excavation, including necessary pavement removal and rock removal, except as otherwise specified.
4. Dewatering and disposal of surplus water.
5. Structural fill, backfill, and grading.
6. Replacement of unpaved roadways, and shrubbery plots.
7. Cleanup and miscellaneous work.
8. Foundation and borrow materials, except as hereinafter specified.
9. Testing and placing system in operation.
10. Any material and equipment required to be installed and utilized for the tests.
11. Pipe, structures, pavement replacement, asphalt and shell driveways and/or appurtenances included within the limits of lump sum work, unless otherwise shown.
12. Maintaining the existing quality of service during construction.
13. Maintaining or detouring of traffic.
14. Appurtenant work as required for a complete and operable system.
15. Seeding and hydromulching.
16. As-built Record Drawings.

**1.08****BID ITEMS****BID ITEM NO.1 - MOBILIZATION/ DEMOBILIZATION**

Measurement and payment for this Bid Item shall include full compensation for the required 100 percent (100%) Performance Bond, 100 Percent (100%) Payment Bond, all required insurance for the project and the Contractor's mobilization and demobilization costs as shown in the Bid Form. Mobilization includes, but it not limited to: preparation and movement of personnel, equipment, supplies and incidentals such as safety and sanitary supplies/ facilities

Payment for mobilization shall not exceed 10 percent (10%) of the total Contract cost unless the Contractor can prove to the Owner that his actual mobilization cost exceeds 10 percent (10%).

Partial payments for this Bid Item will be made in accordance with the following schedule:

Percent of Original Contract Amount:	Percent Allowable Payment of Mobilization/Demobilization Bid Item Price:
5	25
10	35
25	45
50	50
75	75
100	100

These payments will be subject to the standard retainage provided in the Contract. Payment of the retainage will be made after completion of the work and demobilization.

#### **BID ITEM NO. 2 - PROJECT CLOSEOUT**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the lump sum price bid for as-built record drawings, required pressure testing, required bacteriological testing, and any other required certifications to put proposed watermains in service. All items are subject to approval by the Engineer.

Measurement for periodic payments of this lump sum bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.3 - MAINTENANCE OF TRAFFIC**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the lump sum price bid for maintenance of traffic.

Measurement for periodic payments of this lump sum bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.4 - EROSION AND SEDIMENT CONTROL, UTILITY LOCATES AND PRE-CONSTRUCTION VIDEO**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the lump sum price bid for erosion and sediment control, utility locates and pre-construction video.

Measurement for periodic payments of this lump sum bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.



#### **BID ITEM NO.5 - PROPOSED 6" PIPE CONSTRUCTION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot to construct the proposed 6" C-900 DR-18 PVC watermain including the piping, dewatering, fittings, pipe restraints, excavation and grading, cut and cap of existing water mains for abandonment, tracer wire and tape, removal of existing fire hydrant assemblies, and restoration.

Measurement for the proposed pipe and fitting construction shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.6 - PROPOSED 8" PIPE CONSTRUCTION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot to construct the proposed 8" C-900 DR-18 PVC watermain including the piping, dewatering, fittings, pipe restraints, excavation and grading, cut and cap of existing water mains for abandonment, tracer wire and tape, and restoration.

Measurement for the proposed pipe and fitting construction shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.7 - PROPOSED HYDRANT ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid for installation of hydrant assembly's including the hydrants, thrust blocks, tracer wire, and associated valves and piping.

Measurement for periodic payments of this unit price bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.8 - PROPOSED 6" GATE VALVE ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to construct all proposed 6" gate valves, associates pads, tracer wire, and boxes.

Measurement for periodic payments of this unit price bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.9 - PROPOSED 8" GATE VALVE ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to construct all proposed 8" gate valves, associates pads, tracer wire, and boxes.

Measurement for periodic payments of this unit price bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the

Contract Documents.

**BID ITEM NO.10 - 8" HDPE PIPE DIRECTIONAL DRILLING CONSTRUCTION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot of directional drilling including the directional drill, mud trailer, transition fittings, tracer wire, excavation, restoration and HDPE piping.

Measurement for the directional drilling shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

**BID ITEM NO.11 - 10" HDPE PIPE DIRECTIONAL DRILLING CONSTRUCTION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot of directional drilling including the directional drill, mud trailer, transition fittings, tracer wire, excavation, restoration and HDPE piping.

Measurement for the directional drilling shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

**BID ITEM NO.12 - IMPORT FILL FOR UNSUITABLE MATERIAL**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per cubic yard of import fill that is required due to unsuitable materials.

Measurement for the import fill shall be per cubic yard as shown on the Contract Drawings or as ordered by the Engineer in writing.

**BID ITEM NO.13 - PROPOSED 12" X 6" TAPPING SLEEVE AND VALVE ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 12"X6" tapping sleeves, including valves, associated piping, tracer wire, restraints, dewatering, excavation, grading and restoration.

Measurement for periodic payments of this unit price bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

**BID ITEM NO.14 - PROPOSED 6" TAPPING SLEEVE AND VALVE ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 6" tapping sleeves, including valves, associated piping, tracer wire, restraints, dewatering, excavation, grading and restoration.

Measurement for periodic payments of this unit price bid item will be in accordance with the

approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.15 - PROPOSED 8" TAPPING SLEEVE AND VALVE ASSEMBLIES**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 8"x6" tapping sleeves, including valves, associated piping, dewatering, tracer wire, restraints, excavation, grading and restoration.

Measurement for periodic payments of this unit price bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.16 - CONCRETE DRIVEWAY / SIDEWALK OPEN CUT AND RESTORATION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot of concrete driveway/ sidewalk replacement. Maximum horizontal opening for cut is 8 feet.

Measurement for the concrete driveway/sidewalk repair shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.17 - ASPHALT ROADWAY DEMOLITION AND REPAIR**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot of asphalt open cut and replacement. Maximum horizontal opening for cut is 8 feet.

Measurement for the asphalt restore open cut construction shall be per length foot as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.18 - SITE RESTORATION**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the lump sum price bid for sodding and landscaping.

Measurement for periodic payments of this lump sum bid item will be in accordance with the approved Schedule of Values, to be supplied by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.19 - FIRE HYDRANT REMOVAL**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the lump sum price bid for fire hydrant removal.

Measurement for the fire hydrant removal shall be per fire hydrant that is to be removed by the Contractor in accordance with the Contract Documents.

#### **BID ITEM NO.20 - GROUT FILL ABANDONED WATER MAIN**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per cubic yard of grout fill for the abandoned water main.

Measurement for the grout fill shall be per cubic yard as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.21 - NEW METER ASSEMBLY**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid for replacement of each meter assembly including new meter box, meter, curb stop, meter yolk, fittings, adapters, piping, bricks, and service reconnection.

Measurement for the meter assembly's shall be per each meter assembly as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.22 - SHORT WATER SERVICE**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid for replacement of each short water service connection including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services).

Measurement for the short water service shall be per each service connection as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.23 - LONG WATER SERVICE**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid for replacement of each long water service connection including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services).

Measurement for the long water service shall be per each service connection as shown on the Contract Drawings or as ordered by the Engineer in writing.

#### **BID ITEM NO.24 - 6" Line Stop**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 6" line stops, including cutting of existing pipe and two caps in addition to the temporary line stop.

Measurement for the line stops shall be per temporary line stop that is to be installed by the Contractor in accordance with the Contract Documents.

**BID ITEM NO.25 - 8" Line Stop**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 8" line stops, including cutting of existing pipe and two caps in addition to the temporary line stop.

Measurement for the line stops shall be per temporary line stop that is to be installed by the Contractor in accordance with the Contract Documents.

**BID ITEM NO.26 - 10% Contract Contingency**

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid to furnish and install all proposed 8" line stops, including cutting of existing pipe and two caps in addition to the temporary line stop.

Measurement for the line stops shall be per temporary line stop that is to be installed by the Contractor in accordance with the Contract Documents.

**1.09**

**ADDITIVE BID ITEMS**

- A. The construction scope of this project will be limited based on the bid pricing received from contractors. The minimum construction scope is defined as containing the items mentioned above as the Total Base Bid. The below Additive Bid Items may be added to the project and additional time would be negotiated and added to the schedule if the City decides to include with the project.
  
- B. **ADDITIVE BID ITEM NO.1- Main Street (between Florida Ave. and 10<sup>th</sup> Ave.)**

<b>ADDITIVE BID ITEM</b>	<b>DESCRIPTION</b>	<b>UNITS</b>
27	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Restoration)	LF
28	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
29	8" Resilient Seat Gate Valve, Modified Wedge Disc Type	EA
30	Grout Fill Abandoned Water Main	CY
31	New Meter Assembly	EA
32	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA

33	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA
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The measurement and payment for these items are to align with the appropriate description as stated above in the Base Bid Items, along with the exception that cost for Mobilization, Maintenance of Traffic, Project Closeout, Erosion and Sediment Control, Utility Locates and Pre-Construction Video are still to be considered and added to each additive bid item.

**C. ADDITIVE BID ITEM NO.2 - Florida Avenue (between Main St. and Palmetto St.)**

<b>ADDITIVE BID ITEM</b>	<b>DESCRIPTION</b>	<b>UNITS</b>
34	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Restoration)	LF
35	8" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
36	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
37	6" Resilient Seat Gate Valve, Modified Wedge Disc Type	EA
38	12" X 8" Tapping Sleeve and Valve	EA
39	Driveway / Sidewalk Repair	SY
40	Asphalt Roadway Demolition and Repair	SY
41	Grout Fill Abandoned Water Main	CY
42	New Meter Assembly	EA
43	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA
44	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA

The measurement and payment for these items are to align with the appropriate description as stated above in the Base Bid Items, along with the exception that cost for Mobilization, Maintenance of Traffic, Project Closeout, Erosion and Sediment Control, Utility Locates and Pre-Construction Video are still to be considered and added to each additive bid item.

**D. ADDITIVE BID ITEM NO.3 - 10th Avenue (between Main St. and Palmetto St.)**

<b>ADDITIVE BID ITEM</b>	<b>DESCRIPTION</b>	<b>UNITS</b>
45	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Restoration)	LF
46	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
47	12" X 6" Tapping Sleeve and Valve	EA
48	Driveway / Sidewalk Repair	SY
49	Asphalt Roadway Demolition and Repair	SY
50	New Meter Assembly	EA
51	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA
52	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA

The measurement and payment for these items are to align with the appropriate description as stated above in the Base Bid Items, along with the exception that cost for Mobilization, Maintenance of Traffic, Project Closeout, Erosion and Sediment Control, Utility Locates and Pre-Construction Video are still to be considered and added to each additive bid item.

**E. ADDITIVE BID ITEM NO.4 - 9th Avenue (between Main St. and Palmetto St.)**

<b>ADDITIVE BID ITEM</b>	<b>DESCRIPTION</b>	<b>UNITS</b>
53	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Restoration)	LF
54	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
55	12" X 6" Tapping Sleeve and Valve	EA
56	Driveway / Sidewalk Repair	SY
57	Grout Fill Abandoned Water Main	CY

58	New Meter Assembly	EA
59	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA
60	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA

The measurement and payment for these items are to align with the appropriate description as stated above in the Base Bid Items, along with the exception that cost for Mobilization, Maintenance of Traffic, Project Closeout, Erosion and Sediment Control, Utility Locates and Pre-Construction Video are still to be considered and added to each additive bid item.

**F. ADDITIVE BID ITEM NO.5 - 7th Avenue (between Main St. and Palmetto St.)**

<b>ADDITIVE BID ITEM</b>	<b>DESCRIPTION</b>	<b>UNITS</b>
61	Directional Drilling (Including 8" HDPE Pipe, Transition Fittings, Excavation and Restoration)	LF
62	6" C-900 DR-18 PVC Pipe (Including Fittings, Restraints, Trenches, Excavation, and Restoration)	LF
63	6" Tapping Sleeve and Valve	EA
64	Asphalt Roadway Demolition and Repair	SY
65	Grout Fill Abandoned Water Main	CY
66	New Meter Assembly	EA
67	Short Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA
68	Long Water Service including piping, fittings, curb stops, restoration, tap, dewatering, backfill, demolition, excavation (including double services)	EA

The measurement and payment for these items are to align with the appropriate description as stated above in the Base Bid Items, along with the exception that cost for Mobilization, Maintenance of Traffic, Project Closeout, Erosion and Sediment Control, Utility Locates and Pre-Construction Video are still to be considered and added to each additive bid item.

**PART 2 PRODUCTS (NOT USED)**



PART 3 EXECUTION (NOT USED)

END OF SECTION

## SECTION 01152

### REQUESTS FOR PAYMENT

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

Submit Applications for Payment to the Project Manager or as directed at the preconstruction meeting, in accordance with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.

##### **1.02 FORMAT AND DATA REQUIRED**

- A. Submit payment requests in the form provided by the Owner with itemized data typed in accordance with the Bid Form.
- B. Provide construction photographs in accordance with Contract Documents.

##### **1.03 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS**

- A. When the Owner or Engineer requires substantiating data, Contractor shall submit suitable information with a cover letter.
- B. Submit one copy of data and cover letter for each copy of application.

##### **1.04 PREPARATION OF APPLICATION FOR FINAL PAYMENT**

Fill in application form as specified for progress payments.

##### **1.05 SUBMITTAL PROCEDURE**

- A. Submit applications for payment at the times stipulated in the Agreement.
- B. Number: Three (3) copies of each application; all signed and certified by the Contractor.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01153

### CHANGE ORDER PROCEDURES

#### **PART 1 GENERAL**

##### **1.01 DEFINITION**

- A. Change Order: Change in contract scope, price or time that must be approved and executed by the Project Representative before it becomes effective.

##### **1.02 REQUIREMENTS INCLUDED**

- A. The Contractor shall promptly implement change order procedures:
  - 1. Provide full written data required to evaluate changes.
  - 2. Maintain detailed records of work done on a time-and-material/force account basis.
  - 3. Provide full documentation to Engineer on request.
- B. The Contractor shall designate a member of the Contractor's organization who:
  - 1. Is authorized to accept changes to the Work.
  - 2. Is responsible for informing others in the Contractor's employ of the authorized changes into the Work.

##### **1.03 PRELIMINARY PROCEDURES**

- A. Project Manager may initiate changes by submitting a Request to Contractor. Request will include:
  - 1. Detailed description of the change, products, costs and location of the change in the Project.
  - 2. Supplementary or revised Drawings and Specifications.
  - 3. The projected time extension for making the change.
  - 4. A specified period of time during which the requested price will be considered valid.
  - 5. Such request is for information only and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to the Project Manager, containing:
  - 1. Description of the proposed changes.
  - 2. Statement of the reason for making the changes.
  - 3. Statement of the effect on the Contract Sum and the Contract Time.
  - 4. Statement of the effect on the work of separate contractors.
  - 5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

#### **1.04 DOCUMENTATION OF PROPOSALS AND CLAIMS**

- A. Support each quotation for a lump sum proposal and for each unit price which has not previously been established, with sufficient substantiating data to allow the Engineer/Owner to evaluate the quotation.
- B. On request, provide additional data to support time and cost computations:
  - 1. Labor required.
  - 2. Equipment required.
  - 3. Products required.
    - a. Recommended source of purchase and unit cost.
    - b. Quantities required.
  - 4. Taxes, insurance and bonds.
  - 5. Credit for work deleted from Contract, similarly documented.
  - 6. Overhead and profit.
  - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal.
  - 1. Name of the Owner's authorized agent who ordered the work and date of the order.
  - 2. Date and time work was performed and by whom.
  - 3. Time record, summary of hours work and hourly rates paid.
  - 4. Receipts and invoices for:
    - a. Equipment used, listing dates and time of use.
    - b. Products used, listing of quantities.
    - c. Subcontracts.

#### **1.05 PREPARATION OF CHANGE ORDERS**

- A. Project Manager will prepare each Change Order.
- B. Change Order will describe changes in the Work, both additions and deletions, with attachments as necessary to define details of the change.
- C. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

#### **1.06 LUMP SUM/FIXED PRICE CHANGE ORDER**

- A. Project Manager initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by the Contractor, or requests from the Owner, or both.
- B. Once the form has been completed, all copies should be sent to Contractor for approval. After approval by Contractor, all copies should be sent to Owner for approval. The Owner will distribute executed copies after approval by the Board of County Commissioners.

**1.07 UNIT PRICE CHANGE ORDER**

- A. Contents of Change Orders will be based on, either:
  - 1. Owner's definition of the scope of the required changes.
  - 2. Contractor's Proposal for a change, as approved by the Owner.
  - 3. Survey of completed work.
- B. The amounts of the unit prices to be:
  - 1. Those stated in the Agreement.
  - 2. Those mutually agreed upon between Owner and Contractor.

**1.08 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/CONSTRUCTION CHANGE AUTHORIZATION**

- A. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this Section.
- B. Engineer will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.
- C. Engineer will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- D. Owner and Contractor will sign and date the Change Order to indicate their agreement therewith.

**1.09 CORRELATION WITH CONTRACTOR'S SUBMITTALS**

- A. Periodically revise Schedule of Values and Application for Payment forms to record each change as a separate item of work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time. Revise sub schedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01200

### PROJECT MEETINGS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Owner or Engineer shall schedule the pre-construction meeting, periodic progress meetings and special meetings, if required, throughout progress of work.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to ascertain that work is expedited consistent with Contract Documents and construction schedules.

##### 1.02 PRE-CONSTRUCTION MEETING

- A. Attendance:
  - 1. Owner's Engineer.
  - 2. Owner's Project Manager
  - 3. Contractor.
  - 4. Resident Project Representative.
  - 5. Related Labor Contractor's Superintendent.
  - 6. Major Subcontractors.
  - 7. Major Suppliers.
  - 8. Others as appropriate.
- B. Suggested Agenda:
  - 1. Distribution and discussion of:
    - a. List of major subcontractors.
    - b. Projected Construction Schedules.
    - c. Coordination of Utilities
  - 2. Critical work sequencing.
  - 3. Project Coordination.
    - a. Designation of responsible personnel.
    - b. Emergency contact persons with phone numbers.
  - 4. Procedures and processing of:
    - a. Field decisions.
    - b. Submittals.
    - c. Change Orders.
    - d. Applications for Payment.
  - 5. Procedures for maintaining Record Documents.
  - 6. Use of premises:
    - a. Office, work and storage areas.
    - b. Owner's REQUIREMENTS.
  - 7. Temporary utilities.



8. Housekeeping procedures.
9. Liquidated damages.
10. Equal Opportunity Requirements.
11. Laboratory testing.
12. Project / Job meetings: Progress meeting, other special topics as needed.

**1.03            PROGRESS MEETINGS**

The Contractor shall attend monthly progress meetings at the City of Wauchula for the length of the project.

**PART 2            PRODUCTS (NOT USED)**

**PART 3            EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01310

### CONSTRUCTION SCHEDULE & PROJECT RESTRAINTS

#### PART 1 GENERAL

##### 1.01 GENERAL

- A. Construction under this contract must be coordinated with the Owner and accomplished in a logical order to maintain utilization and flow through existing facilities and public properties and rights-of-way and to allow construction to be completed within the time allowed by Contract Documents and in the manner set forth in the Contract.

##### 1.02 CONSTRUCTION SCHEDULING GENERAL PROVISIONS

- A. No work shall be done between 7:00 p.m. and 7:00 a.m. nor on weekends or legal holidays without written permission of the Owner. However, emergency work may be done without prior permission.
- B. Night work may be established by the Contractor as regular procedure with the written permission of the Owner. Such permission, however, may be revoked at any time by the Owner if the Contractor fails to maintain adequate equipment and supervision for the proper execution and control of the work at night.
- C. Due to potential health hazards and requirements of the State of Florida and the U.S. Environmental Protection Agency, existing facilities must be maintained in operation.
- D. The Contractor shall be fully responsible for providing all temporary piping, plumbing, electrical hook-ups, lighting, temporary structure, or other materials, equipment and systems required to maintain the existing facility's operations. All details of temporary piping and temporary construction are not necessarily shown on the Drawings or covered in the Specifications. However, this does not relieve the Contractor of the responsibility to insure that construction will not interrupt proper facility operations.
- E. The Contractor shall designate an authorized representative of his firm who shall be responsible for development and maintenance of the schedule and of progress and payment reports. This representative of the Contractor shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the commitments of the Contractor's schedule.

#### PART 2 PRODUCTS

##### 2.01 GENERAL REQUIREMENTS

- A. The Contractor shall submit a critical path schedule as described herein.
- B. The planning, scheduling, management and execution of the work is the sole responsibility of the Contractor. The progress schedule requirement is established to allow Engineer to review Contractor's planning, scheduling, management and execution of the work; to assist Engineer in evaluating work progress and make progress payments and to

allow other contractors to cooperate and coordinate their activities with those of the Contractor.

## **2.02 FORM OF SCHEDULES**

- A. Prepare schedules using the latest version of Microsoft Project, or other Owner approved software, in the form of a horizontal bar chart diagram. The diagram shall be time-scaled and sequenced by work areas. Horizontal time scale shall identify the first work day of each week.
- B. Activities shall be at least as detailed as the Schedule of Values. Activity durations shall be in whole working days. In addition, man-days shall be shown for each activity or tabulated in an accompanying report.
- C. Diagrams shall be neat and legible and submitted on sheets at least 8-1/2 inches by 11 inches suitable for reproduction. Scale and spacing shall allow space for notations and future revisions.

## **2.03 CONTENT OF SCHEDULES**

- A. Each monthly schedule shall be based on data as of the last day of the current pay period.
- B. Description for each activity shall be brief, but convey the scope of work described.
- C. Activities shall identify all items of work that must be accomplished to achieve substantial completion, such as items pertaining to Contractor's installation and testing activities; items pertaining to the approval of regulatory agencies; contractor's time required for submittals, fabrication and deliveries; the time required by Engineer to review all submittals as set forth in the Contract Documents; items of work required of Owner to support pre-operational, startup and final testing; time required for the relocation of utilities. Activities shall also identify interface milestones with the work of other contractors performing work under separate contracts with Owner.
- D. Schedules shall show the complete sequence of construction by activities. Dates for beginning and completion of each activity shall be indicated as well as projected percentage of completion for each activity as of the first day of each month.
- E. Submittal schedule for shop drawing review, product data, and samples shall show the date of Contractor submittal and the date approved submittals will be required by the Engineer, consistent with the time frames established in the Specifications.
- F. For Contract change orders granting time extensions, the impact on the Contract date(s) shall equal the calendar-day total time extension specified for the applicable work in the Contract change orders.
- G. For actual delays, add activities prior to each delayed activity on the appropriate critical path(s). Data on the added activities of this type shall portray all steps leading to the delay and shall further include the following: separate activity identification, activity description indicating cause of the delay, activity duration consistent with whichever set of dates below applies, the actual start and finish dates of the delay or, if the delay is not finished,

the actual start date and estimated completion date.

- H. For potential delays, add an activity prior to each potentially delayed activity on the appropriate critical path(s). Data for added activities of this type shall include alternatives available to mitigate the delay including acceleration alternatives and further show the following: separate activity identification, activity description indicating cause of the potential delay and activity duration equal to zero work days.

## **2.04 SUPPORTING NARRATIVE**

- A. Status and scheduling reports identified below shall contain a narrative to document the project status, to explain the basis of Contractor's determination of durations, describe the Contract conditions and restraints incorporated into the schedule and provide an analysis pertaining to potential problems and practical steps to mitigate them.
- B. The narrative shall specifically include:
  - 1. Actual completion dates for activities completed during the monthly report period and actual start dates for activities commenced during the monthly report period.
  - 2. Anticipated start dates for activities scheduled to commence during the following monthly report period.
  - 3. Changes in the duration of any activity and minor logic changes.
  - 4. The progress along the critical path in terms of days ahead or behind the Contract date.
  - 5. If the Monthly Status Report indicates an avoidable delay to the Contract completion date or interim completion dates as specified in the Agreement, Contractor shall identify the problem, cause and the activities affected and provide an explanation of the proposed corrective action to meet the milestone dates involved or to mitigate further delays.
  - 6. If the delay is thought to be unavoidable, the Contractor shall identify the problem, cause, duration, specific activities affected and restraints of each activity.
  - 7. The narrative shall also discuss all change order activities whether included or not in the revised/current schedule of legal status. Newly introduced change order work activities and the CPM path(s) that they affect, must be specifically identified. All change order work activities added to the schedule shall conform with the sequencing and Contract Time requirements of the applicable Change Order.
  - 8. Original Contract date(s) shall not be changed except by Contract change order. A revision need not be submitted when the foregoing situations arise unless required by Engineer. Review of a report containing added activities will not be construed to be concurrence with the duration or restraints for such added activities; instead the corresponding data as ultimately incorporated into the applicable Contract change order shall govern.
  - 9. Should Engineer require additional data, this information shall be supplied by Contractor within 10 calendar days.

## **2.05 SUBMITTALS**

- A. Contractor shall submit estimated and preliminary progress schedules (as identified in the Terms and Conditions of the Contract and the General Conditions), monthly status reports, a start-up schedule and an as-built schedule report all as specified herein.

- B. All schedules, including estimated and preliminary schedules, shall be in conformance with the Contract Documents.
- C. The finalized progress schedule discussed in the Contract Documents shall be the first monthly status report and as such shall be in conformance with all applicable specifications contained herein.
- D. Monthly Status Report submittals shall include a time-scaled (days after notice to proceed) diagram showing all contract activities and supporting narrative. The initial detailed schedule shall use the notice to proceed as the start date. The finalized schedule, if concurred with by Owner, shall be the work plan to be used by the contractor for planning, scheduling, managing and executing the work.
- E. The schedule diagram shall be formatted as above. The diagram shall include (1) all detailed activities included in the preliminary and estimated schedule submittals, (2) calendar days prior to substantial completion, (3) summary activities for the remaining days. The critical path activities shall be identified, including critical paths for interim dates, if possible.
- F. The Contractor shall submit progress schedules with each application for payment.
- G. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

## **2.06 MONTHLY STATUS REPORTS**

- A. Contractor shall submit detailed schedule status reports on a monthly basis with the Application for Payment. The first such status report shall be submitted with the first Application for Payment and include data as of the last day of the pay period. The Monthly Report shall include a "marked-up" copy of the latest detailed schedule of legal status and a supporting narrative including updated information as described above. The Monthly Report will be reviewed by Engineer and Contractor at a monthly schedule meeting and Contractor will address Engineer's comments on the subsequent monthly report. Monthly status reports shall be the basis for evaluating Contractor's progress.
- B. The "marked-up" diagram shall show, for the latest detailed schedule of legal status, percentages of completion for all activities, actual start and finish dates and remaining durations, as appropriate. Activities not previously included in the latest detailed schedule of legal status shall be added, except that contractual dates will not be changed except by change order. Review of a marked-up diagram by Engineer will not be construed to constitute concurrence with the time frames, duration, or sequencing for such added activities; instead the corresponding data as ultimately incorporated into an appropriate change order shall govern.

## **2.07 STARTUP SCHEDULE**

- A. At least 60 calendar days prior to the date of substantial completion, Contractor shall submit a time-scaled (days after notice to proceed) diagram detailing the work to take place in the period between 60 days prior to substantial completion, together with a

supporting narrative. Engineer shall have 10 calendar days after receipt of the submittal to respond. Upon receipt of Engineer's comments, Contractor shall make the necessary revisions and submit the revised schedule within 10 calendar days. The resubmittal, if concurred with by Owner, shall be the Work Plan to be used by Contractor for planning, managing, scheduling and executing the remaining work leading to substantial completion.

- B. The time-scaled diagram shall use the latest schedule of legal status for those activities completed ahead of the last 60 calendar days prior to substantial completion and detailed activities for the remaining 60-day period within the time frames outlined in the latest schedule of legal status.
- C. Contractor will be required to continue the requirement for monthly reports, as outlined above. In preparing this report, Contractor must assure that the schedule is consistent with the progress noted in the startup schedule.

## **2.08 REVISIONS**

- A. All revised Schedule Submittals shall be made in the same form and detail as the initial submittal and shall be accompanied by an explanation of the reasons for such revisions, all of which shall be subject to review and concurrence by Engineer. The revision shall incorporate all previously made changes to reflect current as-built conditions. Minor changes to the approved submittal may be approved at monthly meetings; a minor change is not considered a revision in the context of this paragraph.
- B. A revised schedule submittal shall be submitted for review when required by Engineer.

## **PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01340

### SHOP DRAWINGS, PROJECT DATA AND SAMPLES

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall submit to the Engineer for review and approval: working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this section called data), and material samples (hereinafter in this section called samples) as are required for the proper control of work, including, but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and Engineer. This log should include the following items:
1. Submittal description and number assigned.
  2. Date to Engineer.
  3. Date returned to Contractor (from Engineer).
  4. Status of Submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
  5. Date of Resubmittal and Return (as applicable).
  6. Date material released (for fabrication).
  7. Projected date of fabrication.
  8. Projected date of delivery to site.
  9. Projected date and required lead time so that product installation does not delay contact.
  10. Status of O&M manuals submitted.

##### 1.02 CONTRACTOR'S RESPONSIBILITY

- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the contract Documents.
- B. Determine and verify:
1. Field measurements.
  2. Field construction criteria.
  3. Catalog numbers and similar data.
  4. Conformance with Specifications and indicate all variances from the Specifications.
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of



manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Engineer, with No Exceptions Taken or Approved As Noted.
- E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Engineer receives them.
- F. All material & product submittals, other than samples, may be transmitted electronically as a pdf file. All returns to the contractor will be as a pdf file only unless specifically requested otherwise.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary Shop Drawings.

### **1.03 ENGINEER'S REVIEW OF SHOP DRAWINGS AND WORKING DRAWINGS**

- A. The Engineer's review of drawings, data and samples submitted by the Contractor shall cover only general conformity to the Specifications, external connections and dimensions which affect the installation.
- B. The review of drawings and schedules shall be general and shall not be construed:
  - 1. As permitting any departure from the Contract requirements.
  - 2. As relieving the Contractor of responsibility for any errors, including details, dimensions and materials.
  - 3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.
- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which the Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings without noting any exception.
- D. When reviewed by the Engineer, each of the Shop and Working Drawings shall be identified as having received such review being so stamped and dated. Shop Drawings stamped "REJECTED" and with required corrections shown shall be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals, the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.

- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- G. The Engineer shall review a submittal/resubmittal a maximum of three (3) times after which cost of review shall be borne by the Contractor. The cost of engineering shall be equal to the Engineer's actual payroll cost.
- H. When the Shop and Working Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.
- I. No partial submittals shall be reviewed. Incomplete submittals shall be returned to the Contractor and shall be considered not approved until resubmitted.

#### **1.04 SHOP DRAWINGS**

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, drawings, setting drawings, schedule drawings, manufacturer's scale drawings and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.
- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval and original signature as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval and original signature shall be returned to the Contractor for resubmission.
- C. Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
  - 1. Number and title of the drawing.
  - 2. Date of Drawing or revision.
  - 3. Name of project building or facility.
  - 4. Name of contractor and subcontractor submitting drawing.
  - 5. Clear identification of contents and location of the work.
  - 6. Specification title and number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility of executing the work in accordance with the Contract, even though such drawings have been reviewed.
- E. Data on materials and equipment shall include, without limitation, materials and equipment lists, catalog sheets, cuts, performance curves, diagrams, materials of construction and

similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.

- F. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five installations where identical equipment has been installed and have been in operation for a period of at least one (1) year.
- H. Only the Engineer will utilize the color "red" in marking shop drawing submittals.

#### **1.05 WORKING DRAWINGS**

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's fabrication and erection drawings for structures such as roof trusses, steelwork, precast concrete elements, bulkheads, support of open cut excavation, support of utilities, groundwater control systems, forming and false work; underpinning; and for such other work as may be required for construction of the project.
- B. Copies of working drawings as noted above, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer and shall be submitted at least thirty (30) days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. Working drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the Engineer, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the Owner and Engineer shall not have responsibility therefor.

#### **1.06 SAMPLES**

- A. The Contractor shall furnish, for the review of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until reviewed by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:

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

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01370

### SCHEDULE OF VALUES

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

- A. The Contractor shall submit to the Engineer a Schedule of Values allocated to the various portions of the work, within 10 days after date of Notice to Proceed.
- B. Upon request of the Engineer, the Contractor shall support the values with data which will substantiate their correctness.
- C. The Schedule of Values shall be used only as the basis for the Contractor's Applications for Payment.

##### **1.02 FORM AND CONTENT OF SCHEDULE OF VALUES**

- A. Schedule of Values will be considered for approval by Engineer upon Contractor's request. Identify schedule with:
  - 1. Title of Project and location.
  - 2. Project number.
  - 3. Name and address of Contractor.
  - 4. Contract designation.
  - 5. Date of submission.
- B. Schedule of Values shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- C. Follow the table of contents for the Contract Document as the format for listing component items for structures:
  - 1. Identify each line item with the number and title of the respective major section of the specification.
  - 2. For each line item, list sub values of major products or operations under item.
- D. Follow the bid sheets included in this Contract Documents as the format for listing component items for pipe lines.
- E. The sum of all values listed in the schedule shall equal the total Contract sum.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01380

### CONSTRUCTION PHOTOGRAPHS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall employ a competent photographer to take construction record photographs or perform video, recording including furnishing all labor, materials, equipment and incidentals necessary to obtain photographs and/or video recordings of all construction areas.
- B. Preconstruction record information shall consist of video recordings on flash drives or sent via email.
- C. Construction progress information shall consist of photographs and digital photographs on a flash drive or sent via email.

##### 1.02 QUALIFICATIONS

- A. All photography shall be done by a competent camera operator who is fully experienced and qualified with the specified equipment.
- B. For the video recording, the audio portion should be done by a person qualified and knowledgeable in the specifics of the Contract, who shall speak with clarity and diction so as to be easily understood.

##### 1.03 PROJECT PHOTOGRAPHS

- A. Provide one print of each photograph with each pay application.
- B. Provide one recordable compact disc with digital photographs with each pay application.
- C. Negatives:
  - 1. All negatives shall remain the property of photographer.
  - 2. The Contractor shall require that photographer maintain negatives or protected digital files for a period of two years from date of substantial completion of the project.
  - 3. Photographer shall agree to furnish additional prints to Owner and Engineer at commercial rates applicable at time of purchase. Photographer shall also agree to participate as required in any litigation requiring the photographer as an expert witness.
- D. The Contractor shall pay all costs associated with the required photography and prints. Any parties requiring additional photography or prints shall pay the photographer directly.
- E. All project photographs shall be a single weight, color image. All finishes shall be smooth surface and glossy and all prints shall be 8 inches x 10 inches.



- F. Each print shall have clearly marked on the back, the name of the project, the orientation of view, the date and time of exposure, name and address of the photographer and the photographers numbered identification of exposure.
- G. All project photographs shall be taken from locations to adequately illustrate conditions prior to construction, or conditions of construction and state of progress. The Contractor shall consult with the Engineer at each period of photography for instructions concerning views required.

**1.04 VIDEO RECORDINGS**

- A. Video, recording shall be done along all routes that are scheduled for construction. Video, recording shall include full, recording of both sides of all streets and the entire width of easements plus 10 feet on each side on which construction is to be performed. All video recording shall be in full color.
- B. A complete view, in sufficient detail with audio description of the exact location shall be provided.
- C. The engineering plans shall be used as a reference for stationing in the audio portion of the recordings for easy location identification.
- D. Two complete sets of video recordings shall be delivered to the Engineer on flash drive or email for the permanent and exclusive use of the Engineer prior to the start of any construction on the project.
- E. All video recordings shall contain the name of the project, the date and time of the video, recording, the name and address of the photographer and any other identifying information required.
- F. Construction shall not start until preconstruction video recordings are completed, submitted and accepted by the Engineer. In addition, no progress payments shall be made until the preconstruction video recordings are accepted by the Engineer.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01410

### TESTING AND TESTING LABORATORY SERVICES

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Contractor shall employ and pay for the services of an independent testing laboratory to perform testing specifically indicated on the Contract Documents or called out in the Specifications. Owner may elect to have materials and equipment tested for conformity with the Contract Documents at any time.
1. Contractor shall cooperate fully with the laboratory to facilitate the execution of its required services.
  2. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the Contract.

##### 1.02 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
1. Release, revoke, alter or enlarge on requirements of Contract Documents.
  2. Approve or accept any portion of the Work.
  3. Perform any duties of the Contractor.

##### 1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to Work and/or to Manufacturer's operations.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor and no extra charge to the Owner shall be allowed on account of such testing and certification.
- E. Furnish incidental labor and facilities:
1. To provide access to work to be tested.

2. To obtain and handle samples at the project site or at the source of the product to be tested.
  3. To facilitate inspections and tests.
  4. For storage and curing of test samples.
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the Engineer.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01510

### TEMPORARY AND PERMANENT UTILITIES

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

The Contractor shall be responsible for furnishing all requisite temporary utilities, i.e., power, water, sanitation, etc. The Contractor shall obtain and pay for all permits required as well as pay for all temporary usages. The Contractor shall remove all temporary facilities upon completion of work.

##### 1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with Federal, State and Local codes and regulations and with utility company requirements.
- C. Comply with County Health Department regulations.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS, GENERAL

Materials for temporary utilities may be "used". Materials for electrical utilities shall be adequate in capacity for the required usage, shall not create unsafe conditions and shall not violate requirements of applicable codes and standards.

##### 2.02 TEMPORARY ELECTRICITY AND LIGHTING

Arrange with the applicable utility company for temporary power supply. Provide service required for temporary power and lighting and pay all costs for permits, service and for power used.

##### 2.03 TEMPORARY WATER

- A. The Contractor shall arrange with City of Wauchula Utilities Customer Service office to provide water for construction purposes, i.e., meter, pay all costs for installation, maintenance and removal, and service charges for water used.
- B. The Contractor shall protect piping and fitting against freezing.

##### 2.04 TEMPORARY SANITARY FACILITIES

- A. The Contractor shall provide sanitary facilities in compliance with all laws and regulations.
- B. The Contractor shall service, clean and maintain facilities and enclosures.

**PART 3 EXECUTION**

**3.01 GENERAL**

- A. The Contractor shall maintain and operate systems to assure continuous service.
- B. The Contractor shall modify and extend systems as work progress requires.

**3.02 REMOVAL**

- A. The Contractor shall completely remove temporary materials and equipment when their use is no longer required.
- B. The Contractor shall clean and repair damage caused by temporary installations or use of temporary facilities.

**END OF SECTION**

## SECTION 01570

### TRAFFIC REGULATION

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall be responsible for providing safe and expeditious movement of traffic through construction zones. A construction zone is defined as the immediate areas of actual construction and all abutting areas which are used by the Contractor and which interfere with the driving or walking public.
- B. The Contractor shall remove temporary equipment and facilities when no longer required, restore grounds to original or to specified conditions.

##### 1.02 TRAFFIC CONTROL

- A. The necessary traffic control shall include, but not be limited to, such items as proper construction warning signs, signals, lighting devices, markings, barricades, channelization and hand signaling devices. The Contractor shall be responsible for installation and maintenance of all devices and detour routes and signage for the duration of the construction period. The Contractor shall utilize the appropriate traffic plan from the FDOT Maintenance of Traffic Standards, Series 600 of the FDOT Roadway & Traffic Design Standards, Latest Edition.
- B. Should there be the necessity to close any portion of a roadway carrying vehicles or pedestrians the Contractor shall submit a Traffic Control Plan (TCP) at least 5 days before a partial or full day closure, and at least 8 days before a multi-day closure. TCP shall be submitted, along with a copy of their accreditation, by a certified IMSA or ATSA Traffic Control Specialist.
  - 1. At no time will more than one (1) lane of a roadway be closed to vehicles and pedestrians without an approved road closure from the City of Wauchula or County Transportation Department. With any such closings, adequate provision shall be made for the safe expeditious movement of each.
  - 2. All traffic control signs must be in place and inspected at least 1 day in advance of the closure. Multi-day closures notification signs shall be in place at least 3 days in advance of the closure. All signs must be covered when no in effect, and checked twice a day by the Worksite Traffic Supervisor when they are in effect.
- C. The Contractor shall be responsible for removal, relocation, or replacement of any traffic control device in the construction area which exists as part of the normal preconstruction traffic control scheme. Any such actions shall be performed by the Contractor under the supervision and in accordance with the instructions of the applicable highway department unless otherwise specified.
- D. The Contractor will consult with the Engineer immediately on any vehicular or pedestrian safety or efficiency problem incurred as a result of construction of the project.

- E. The Contractor shall provide ready access to businesses and homes in the project area during construction. The Contractor shall be responsible for coordinating this work with affected homeowners.
- F. When conditions require the temporary installation of signs, pavement markings and traffic barriers for the protection of workers and traffic, the entire array of such devices shall be depicted on working drawings for each separate stage of work. These drawings shall be submitted to the Engineer for review and approval prior to commencement of work on the site.
- G. Precast concrete traffic barriers shall be placed adjacent to trenches and other excavations deeper than six inches below the adjacent pavement surface.
- H. The Contractor is responsible for submitting a traffic control and pedestrian management plan for review and approval by the City of Wauchula and owner of the right of way (i.e. Harden County)

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01580

### PROJECT IDENTIFICATION AND SIGNS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Furnish, install and maintain County project identification signs.
- B. Remove signs on completion of construction.
- C. Allow no other signs to be displayed except for traffic control and safety.

##### 1.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign, of not less than 32 square feet (3 square meters) area, with painted graphic content to include:
  - 1. Title of Project.
  - 2. Name of City.
  - 3. Names and titles of authorities as directed by Owner.
  - 4. Prime Contractor.
- B. Graphic design, style of lettering and colors: As approved by the Owner and Engineer.
- C. Erect on the site at a lighted location of high public visibility, adjacent to main entrance to site, as approved by the Owner.

##### 1.03 INFORMATIONAL SIGNS

- a. Painted signs with painted lettering, or standard products.
  - 1. Size of signs and lettering: as required by regulatory agencies, or as appropriate to usage.
  - 2. Colors: as required by regulatory agencies, otherwise of uniform colors throughout project.
- B. Erect at appropriate locations to provide required information.

##### 1.04 QUALITY ASSURANCE

- A. Sign Painter: Professional experience in type of work required.
- B. Finishes, Painting: Adequate to resist weathering and fading for scheduled construction period.

##### 1.05 PUBLIC NOTIFICATION

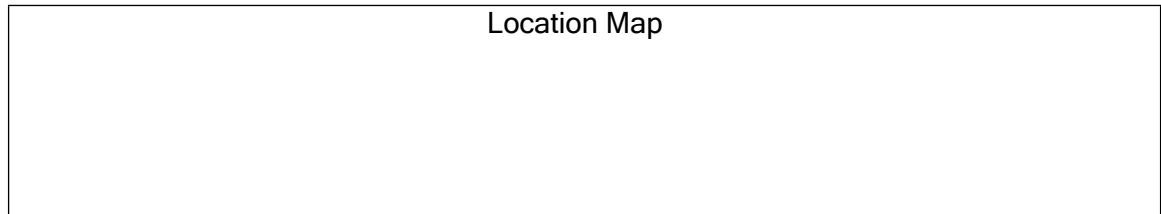


- A. Door Hangers: The Contractor shall generate and distribute door hangers to all residents who will be impacted by project construction.
  - 1. Residents impacted include anyone who resides inside, or within 500 feet of project limits of construction.
- B. Door Hangers shall be distributed prior to start of construction of the project. Hangers shall be affixed to doors of residents via elastic bands or tape.

EXAMPLE:

PLEASE PARDON THE INCONVENIENCE WHILE THE ROADWAY IS BEING  
RECONSTRUCTED IN YOUR NEIGHBORHOOD

This project consists of utility improvements and the reconstruction of ??? road from U.S. ??? to ??? Street West. The project is expected to begin in August, 202X and be completed in July 202X.



WE HOPE TO KEEP ANY INCONVENIENCE TO A MINIMUM. HOWEVER, IF YOU  
HAVE ANY PROBLEMS, PLEASE CONTACT THE FOLLOWING:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>A. Contractor<br/>Contractor Address<br/>Contractor Phone (Site Phone)</li> <li>B. Project Inspector<br/>Inspector Phone Number</li> </ul> | <ul style="list-style-type: none"> <li>Project Manager<br/>PM Address<br/>PM Phone No. &amp; Ext.</li> </ul> |
|---|--|

**PART 2 PRODUCTS**

**2.01 SIGN MATERIALS**

- A. Structure and Framing: May be new or used, wood or metal, in sound condition structurally adequate to work and suitable for specified finish.
- B. Sign Surfaces: Exterior softwood plywood with medium density overlay, standard large sizes to minimize joints.
  - 1. Thickness: As required by standards to span framing members, to provide even, smooth surface without waves or buckles.

- C. Rough Hardware: Galvanized.
- D. Paint: Exterior quality, as specified in the Contract Documents.

**PART 3 EXECUTION**

**3.01 PROJECT IDENTIFICATION SIGN**

- A. Paint exposed surface or supports, framing and surface material; one coat of primer and one coat of exterior paint.
- B. Paint graphics in styles, size and colors selected.

**3.02 MAINTENANCE**

The Contractor shall maintain signs and supports in a neat, clean condition; repair damages to structures, framing or sign.

**3.03 REMOVAL**

The Contractor shall remove signs, framing, supports and foundations at completion of project.

**END OF SECTION**

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## SECTION 01600

### MATERIAL AND EQUIPMENT

#### 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 Engineer.
  3. Manufactured and Fabricated Products:
    - a. Design, fabricate and assemble in accordance with the best engineering and shop practices.
    - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
    - c. Two or more items of the same kind shall be identical and manufactured 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 specified.
  5. All material and equipment incorporated into the project shall be new.

##### 1.02 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, including two copies to Engineer. 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. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer prior to proceeding. Do not proceed with work without clear instructions.

##### 1.03 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site.
1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
  2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals and that products are properly protected and undamaged.

- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

**1.04 SUBSTITUTIONS AND PRODUCT OPTIONS**

Contractor's Options:

1. For products specified only by reference standard, select any product meeting that standard.
2. For products specified by naming one or more products or manufacturers and "or equal", Contractor must submit a request for substitutions of any product or manufacturer not specifically named in a timely manner so as not to adversely affect the construction schedule.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01620

### STORAGE AND PROTECTION

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

Provide secure storage and protection for products to be incorporated into the work and maintenance and protection for products after installation and until completion of Work.

##### 1.02 STORAGE

- A. Store products immediately on delivery and protect until installed in the Work, in accord with manufacturer's instructions, with seals and labels intact and legible.
- B. Exterior Storage
  - 1. Provide substantial platform, blocking or skids to support fabricated products above ground to 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.
    - b. Prevent mixing of refuse or chemically injurious materials or liquids.
- C. Arrange storage in manner to provide easy access for inspection.

##### 1.03 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. Any weathering of products, coatings and finishes is not acceptable under requirements of these 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 exterior of package.
  - 1. Equipment shall not be shipped until approved by the Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Engineer.
  - 2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity controlled building approved by the Engineer until such time as the equipment is to be installed.
  - 3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise

instructed by the manufacturer.

4. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to insure that the equipment does not deteriorate from lack of use.
5. Lubricants shall be changed upon completion of installation and as frequently as required, thereafter during the period between installation and acceptance.
6. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guaranty the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

**1.04 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.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01700

### CONTRACT CLOSEOUT

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the work.

##### 1.02 SUBSTANTIAL COMPLETION

- A. The Contractor shall submit the following items when the Contractor considers the work to be substantially complete:
  - 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, the Owner and Engineer shall make an inspection to determine the status of completion.
- C. Project record documents and operations and maintenance manuals must be submitted before the project shall be considered substantially complete.
- D. If the Engineer determines that the work is not substantially complete:
  - 1. The Engineer shall notify the Contractor in writing, stating the reasons.
  - 2. The Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the Engineer.
  - 3. The Engineer shall reinspect the work.
- E. When the Engineer finds that the work is substantially complete:
  - 1. The engineer shall be responsible for observation of construction and upon completion of the project a letter of certification from the engineer indicating that construction was carried out in conformance to the approved plans, shall be submitted to the City of Wauchula, as applicable.

##### 1.03 FINAL INSPECTION

- A. When the Contractor considered the work to be complete, he shall submit written certification stating that:
  - 1. The Contract Documents have been reviewed.
  - 2. The work has been inspected for compliance with Contract Documents.
  - 3. The work has been completed in accordance with Contract Documents.
  - 4. The equipment and systems have been tested in the presence of the Owner's



5. representative and are operational.
  5. The work is completed and ready for final inspection.
- B. The Engineer shall make an inspection to verify the status of completion after receipt of such certification.
  - C. If the Engineer determines that the work is incomplete or defective:
    1. The Engineer shall promptly notify the Contractor in writing, listing the incomplete or defective work.
    2. The Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to Engineer that the work is complete.
    3. The Engineer shall reinspect the work.
  - D. Upon finding the work to be acceptable under the Contract Documents, the Engineer shall request the Contractor to make closeout submittals.
  - E. For each additional inspection beyond a total of three (3) inspections for substantial and final completion due to the incompleteness of the work, the Contractor shall reimburse the Owner for the Engineer's fees.

#### **1.04 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER**

- A. Project Record Documents (prior to substantial completion).
- B. Operation and maintenance manuals (prior to substantial completion).
- C. Warranties and Bonds.
- D. Evidence of Payment and Release of Liens: In accordance with requirements of General and Supplementary Conditions.
- E. Certification letter from Florida Department of Transportation, as applicable.
- F. Certificate of Insurance for Products and Completed Operations.
- G. Final Reconciliation, Warranty Period Declaration, and Contractor's Affidavit

#### **1.05 FINAL ADJUSTMENT OF ACCOUNTS**

- A. Submit a final statement of accounting to the Engineer.
- 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. Unit Prices
    - c. Penalties and Bonuses
    - d. Deductions for Liquidated Damages

- e. Other Adjustments
- 3. Total Contract Sum, as adjusted.
- 4. Previous payments.
- 5. Sum remaining due.

C. Project Management shall prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

**1.06 FINAL APPLICATION FOR PAYMENT**

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 USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01710

### CLEANING

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

Execute cleaning during progress of the work and at completion of the work, as required by the General Conditions.

##### **1.02 DISPOSAL REQUIREMENTS**

Conduct cleaning and disposal operations to comply with all Federal, State and Local 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 manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces 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 materials, rubbish and wind-blown debris, resulting from construction operations.
- 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.

##### **3.02 DUST CONTROL**

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- 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 workmen for final cleaning.
- B. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- C. 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 that the entire work is clean.

**END OF SECTION**

## SECTION 01720

### PROJECT RECORD DOCUMENTS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

Contractor shall maintain at the site for the Owner one record copy of:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Engineer's field orders or written instructions.
6. Approved shop drawings, working drawings and samples.
7. Field test records.
8. Construction photographs.

##### 1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
  1. Provide files and racks for storage of documents.
  2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Engineer.

##### 1.03 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Engineer.

##### 1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
- C. Do not conceal any work until required information is recorded.
- D. Drawings; legibly mark to record actual construction:
  1. All underground piping with elevations and dimensions. Changes to piping

location. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Actual installed pipe material, class, etc. Locations of drainage ditches, swales, water lines and force mains shall be shown every 200 feet (measured along the centerline) or alternate lot lines, whichever is closer. Dimensions at these locations shall indicate distance from centerline of right-of-way to the facility.

2. Field changes of dimension and detail.
3. Changes made by Field Order or by Change Order.
4. Details not on original contract drawings.
5. Equipment and piping relocations.
6. Locations of all valves, fire hydrants, manholes, water and sewer services, water and force main fittings, underdrain cleanouts, catch basins, junction boxes and any other structures located in the right-of-way or easement, shall be located by elevation and by station and offset based on intersection P.I.'s and centerline of right-of-way. For facilities located on private roads, the dimensioning shall be from centerline of paving or another readily visible baseline.
7. Elevations shall be provided for all manhole rim and inverts; junction box rim and inverts; catch basin rim and inverts; and baffle, weir and invert elevations in control structures. Elevations shall also be provided at the PVI's and at every other lot line or 200 feet, whichever is less, of drainage swales and ditches. Bench marks and elevation datum shall be indicated.
8. Slopes for pipes and ditches shall be recalculated, based on actual field measured distances, elevations, pipe sizes, and type shown. Cross section of drainage ditches and swales shall be verified.
9. Centerline of roads shall be tied to right-of-way lines. Elevation of roadway centerline shall be given at PVI's and at all intersections.
10. Record drawings shall show bearings and distances for all right-of-way and easement lines, and property corners.
11. Sidewalks, fences and walls, if installed at the time of initial record drawing submittal, shall be located every 200 feet or alternate lot lines, whichever is closer. Dimensions shall include distance from the right-of-way line and the back of curb and lot line or easement line.
12. Sanitary sewer mainline wyes shall be located from the downstream manhole. These dimensions shall be provided by on-site inspections or televising of the sewer following installation.
13. Elevations shall be provided on the top of operating nuts for all water and force main valves.
14. Allowable tolerance shall be  $\pm 6.0$  inches for horizontal dimensions. Vertical dimensions such as the difference in elevations between manhole inverts shall have an allowable tolerance of  $\pm 1/8$  inch per 50 feet (or part thereof) of horizontal distance up to a maximum tolerance of  $\pm 2$  inch.
15. Properly prepared record drawings on mylar, together with two copies, shall be certified by a design professional (Engineer and/or Surveyor registered in the State of Florida), employed by the Contractor, and submitted to the Owner/Engineer.

E. Specifications and Addenda; Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order.

- F. Shop Drawings (after final review and approval):
  - 1. Five sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

**1.05 SUBMITTAL**

- A. Prior to substantial completion and prior to starting the bacteria testing of water lines, deliver signed and sealed Record Documents and Record Drawings to the Engineer. These will be reviewed and verified by the inspector. If there are any required changes or additions, these shall be completed and the entire signed and sealed set resubmitted prior to final pay application.
- B. The Contractor shall employ a Professional Engineer or Surveyor registered in the State of Florida to verify survey data and properly prepare record drawings. Record drawings shall be certified by the professional(s) (Engineer or Surveyor licensed in Florida), as stipulated by the Land Development Ordinance and submitted on signed and sealed paper drawings, signed and dated mylar drawings together with an AutoCAD version on a recordable compact disk (CD).
- C. The CD shall contain media in AutoCad Version 2004 or later, or in any other CAD program compatible with AutoCad in DWG or DXF form. All fonts, line types, shape files or other pertinent information used in the drawing and not normally included in AutoCad shall be included on the media with a text file or attached noted as to its relevance and use.
- D. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.
- E. Accompany submittal with transmittal letter, containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.
  - 4. Title and number of each Record Document.
  - 5. Signature of Contractor or his authorized representative.

Note: The data required to properly prepare these record drawings shall be obtained at the site, at no cost to the Owner by the responsible design professional or his/her duly appointed representative. The appointed representative shall be a qualified employee of the responsible design professional or a qualified inspector retained by the responsible design professional on a project-by-project basis.

**PART 2 STANDARDS**

**2.01 MINIMUM RECORD DRAWING STANDARDS FOR ALL RECORD DRAWINGS SUBMITTED TO CITY OF WAUCHULA**

- A. Record drawings shall be submitted to at least the level of detail in the contract documents. It is anticipated that the original contract documents shall serve as at least a



background for all record information. Original drawings in CAD format may be requested of the Engineer.

- B. Drawings shall meet the criteria of paragraph 1.04 D above.

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 01730

### OPERATING AND MAINTENANCE DATA

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
- B. Prepare operating and maintenance data as specified in this and as referenced in other pertinent sections of Specifications.
- C. Instruct Owner's personnel in maintenance of products and equipment and systems.
- D. Provide three (3) sets of operating and maintenance manuals for each piece of equipment provided within this Contract.

##### 1.02 FORM OF SUBMITTALS

- A. Prepare data in form of an instructional manual for use by Owner's personnel.
- B. Format:
  - 1. Size: 8-1/2 inch x 11 inch
  - 2. Paper: 20 pound minimum, white, for typed pages
  - 3. Text: Manufacturer's printed data or neatly typewritten
  - 4. Drawings:
    - a. Provide reinforced punched binder tab, bind in with text.
    - b. Fold larger drawings to size of text pages.
  - 5. Provide fly-leaf for each separate product or each piece of operating equipment.
    - a. Provide typed description of product and major component parts of equipment.
    - b. Provide indexed tabs.
  - 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS".  
List:
    - a. Title of Project.
    - b. Identity of separate structures as applicable.
    - c. Identity of general subject matter covered in the manual.
- C. Binders:
  - 1. Commercial quality three-ring binders with durable and cleanable plastic covers.
  - 2. Maximum ring size: 1 inch.
  - 3. When multiple binders are used, correlate the data into related consistent groupings.

### 1.03 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit three copies of complete manual in final form.
- B. Content for each unit of equipment and system, as appropriate:
  - 1. Description of unit and component parts.
    - a. Function, normal operating characteristics and limiting conditions.
    - b. Performance curves, engineering data and tests.
    - c. Complete nomenclature and commercial number of replaceable parts.
  - 2. Operating Procedures:
    - a. Start-up, break-in, routine and normal operating instructions.
    - b. Regulation, control, stopping, shut-down and emergency instructions.
    - c. Summer and winter operating instructions.
    - d. Special operating instructions.
  - 3. Maintenance Procedures:
    - a. Routine operations.
    - b. Guide to "trouble-shooting".
    - c. Disassembly, repair and reassembly.
    - d. Alignment, adjusting and checking.
  - 4. Servicing and lubricating schedule.
    - a. List of lubricants required.
  - 5. Manufacturer's printed operating and maintenance instructions.
  - 6. Description of sequence of operation by control manufacturer.
  - 7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
    - a. List of predicted parts subject to wear.
    - b. Items recommended to be stocked as spare parts.
  - 8. As installed control diagrams by controls manufacturer.
  - 9. Each contractor's coordination drawings.
    - a. As installed color coded piping diagrams.
  - 10. Charts of valve tag numbers, with location and function of each valve.
  - 11. List of original manufacturer's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage.
  - 12. Other data as required under pertinent sections of specifications.
- C. Content, for each electric and electronic system, as appropriate:
  - 1. Description of system and component parts.
    - a. Function, normal operating characteristics and limiting conditions.
    - b. Performance curves, engineering data and tests.
    - c. Complete nomenclature and commercial number of replaceable parts.
  - 2. Circuit directories of panelboards.
    - a. Electrical service.
    - b. Controls.
    - c. Communications.
  - 3. As-installed color coded wiring diagrams.
  - 4. Operating procedures:
    - a. Routine and normal operating instructions.

- b. Sequences required.
  - c. Special operating instructions.
  - 5. Maintenance procedures:
    - a. Routine operations.
    - b. Guide to "trouble-shooting".
    - c. Disassembly, repair and reassembly.
    - d. Adjustment and checking.
  - 6. Manufacturer's printed operating and maintenance instructions.
  - 7. List of original manufacture's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage.
  - 8. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
- D. Prepare and include additional data when the need for such data becomes apparent during instruction on Owner's personnel.
  - E. Additional requirements for operating and maintenance data: Respective sections of Specifications.

**1.04 SUBMITTAL SCHEDULE**

- A. Submit one copy of completed data in final form fifteen days prior to substantial completion.
  - 1. Copy will be returned after substantial completion, with comments (if any).
- B. Submit two (2) copies of approved data in final form. Final acceptance will not be provided until the completed manual is received and approved.

**1.05 INSTRUCTION OF OWNER'S PERSONNEL**

- A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems.
- B. Operating and maintenance manual shall constitute the basis of instruction.
  - 1. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

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## SECTION 01740

### WARRANTIES AND BONDS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to Engineer for review and transmittal.

##### 1.02 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: Two each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
  - 1. Product or work item.
  - 2. Firm, with name of principal, address and telephone number.
  - 3. Scope.
  - 4. Date of beginning of warranty, bond or service and maintenance contract.
  - 5. Duration of warranty, bond or service maintenance contract.
  - 6. Provide information for Owner's personnel:
    - a. Proper procedure in case of failure.
    - b. Instances which might affect the validity of warranty or bond.
  - 7. Contractor, name of responsible principal, address and telephone number.

##### 1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
  - 1. Size 8-1/2 inch x 11 inch punched sheets for standard 3-ring binder. Fold larger sheets to fit into binders.
  - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
    - a. Title of Project.
    - b. Name of Contractor.

- C. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

**1.04 TIME OF SUBMITTALS**

- A. Make submittals within ten days after date of substantial completion and prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond date of substantial completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

**1.05 SUBMITTALS REQUIRED**

- A. Submit warranties, bonds, service and maintenance contracts as specified in respective sections of Specifications.
- B. Approval by the Owner of all documents required under this section is a pre-requisite to requesting a final inspection and final payment

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

## SECTION 02050

### DEMOLITION

#### PART 1 GENERAL

##### 1.01 DESCRIPTION OF WORK

- A. This Section includes demolition, debris removal and items to be salvaged as indicated on the Drawings and as specified herein.
- B. Demolition items consist of, but are not limited to the following:
  - 1. Removal of meter boxes, hydrants, piping, and fittings.
- C. Items to be salvaged and turned over to the Owner shall be identified by the Owner during the preconstruction meeting.

##### 1.02 QUALITY ASSURANCE

- A. Accomplish all demolition work so there is no injury to any persons and no damage to adjacent structures or property. All demolition methods shall be in full compliance with municipal, county, state, and federal ordinances. Demolition work shall comply with the requirements of the Occupational Safety and Health Administration (OSHA).
- B. The Contractor shall comply with all municipal, county, state and federal ordinances regarding the disposal of rubble, scrap metal, and refuse.
- C. Demolition procedures shall provide for safe conduct of the work, protection of property which is to remain undisturbed, and coordination with other work in progress.

##### 1.03 JOB CONDITIONS

- A. It shall be the responsibility of the Contractor to visit the site and inspect the nature and condition of the items to be removed and salvaged before submitting his bid.
- B. Dust Control: Control the amount of dust resulting from demolition to prevent the spread of dust to occupied portions of buildings and to avoid creation of a nuisance in the surrounding area. Do not use water when it will result in, or create, hazardous or objectionable conditions such as flooding and pollution.
- C. Protection of Existing Work: Protect existing work. Work damaged by the Contractor shall be repaired to match existing work.
- D. No interference with plant operations: Demolition work shall be scheduled and conducted so there is no interference with normal plant operations or deliveries.



**PART 2 PRODUCTS**

**2.01 REPAIR AND REPLACEMENT MATERIALS**

- A. Materials used in the repair or replacement of existing work to remain shall be identical or equal to the materials used in existing work when new.

**PART 3 EXECUTION**

**3.01 STRUCTURES AND BUILDINGS**

- A. Remove all parts of existing structures to be demolished to a minimum depth of 3-ft below grade unless otherwise shown on the drawings. Structures left below grade shall be punctured to allow water to pass through and prevent flotation.

**3.02 EQUIPMENT**

- A. Completely remove equipment which is designated to be removed.
- B. Remove concrete equipment bases if the existing bases are not to be used for new equipment.
- C. Completely remove isolated equipment bases.

**3.03 PIPING**

- A. Completely remove piping, conduit, and wiring in structures and buildings which are to be demolished, partially demolished, and where otherwise designated to be removed as shown on the Drawings. When not indicated on the Drawings, the removal of said piping, conduit and wiring shall be a minimum of 5-feet from the outside of the structure or building. The Contractor shall schedule underground pipe removal and new pipe installation in order to minimize disruption of the existing piping system and reduce bypass pumping.
- B. Underground piping, conduit, and wiring which are to be abandoned and do not interfere with new work may be left in place, unless otherwise shown on the Drawings. Plug and seal ends of underground piping to be abandoned. Grout fill abandoned pipes in accordance with plans. Do not leave abandoned branches of piping and wiring "live". Isolate abandoned branches by closing branch valve at main or by disconnecting branch at main. Plug, cap, and seal active branch at isolating valve or point of disconnection.
- C. Properly disconnect, seal and plug utility services to structures and buildings which are completely demolished. Properly disconnect, seal, and plug utility lines within structures and buildings which are partially demolished.

**3.04 DISPOSAL**

- A. Equipment, piping, and materials which are designated to remain the property of the Owner shall be moved to a location within the project site designated by the Owner.

- B. All removed equipment, piping, and materials not specifically designated to remain the property of the Owner shall become the property of the Contractor and shall be removed from the site.
- C. Do not allow debris and rubbish to accumulate on the site. Remove debris and rubbish from the site.

**3.05 FILLING**

- A. Backfill excavations resulting from demolition.
- B. Backfill excavations which will not be beneath new structures, buildings, piping, or other new work as specified in this paragraph.
- C. Backfill excavations more than three feet deep or more than five cubic yards in volume as specified in Section 02200 - Earthwork.
- D. Place and compact backfill in other excavations to produce an adequate foundation for grassing.

**3.06 CLEAN-UP**

- A. Clean-up in areas where other work is to be done following demolition shall be as specified in the applicable Sections.
- B. Clean-up the job site in areas where no other work is to be done under this Contract following demolition. Remove all debris and rubbish, temporary facilities, and equipment. Level surface irregularities to eliminate depressions. Leave the work in a neat and presentable condition.

**END OF SECTION**

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## SECTION 02064

### MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required to modify, alter and/or convert existing structures as shown or specified and as required for the installation of piping, mechanical equipment and appurtenances. Existing piping and equipment shall be removed and dismantled as necessary for the performance of facility alterations in accordance with the requirements herein specified.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

##### 3.01 GENERAL

- A. The Contractor shall cut, repair, reuse, excavate, demolish or otherwise remove parts of the existing structures or appurtenances, as indicated on the Contract Drawings, herein specified, or necessary to permit completion of the work under this Contract. The Contractor shall dispose of surplus materials resulting from the above work in an approved manner. The work shall include all necessary cutting and bending of reinforcing steel, structural steel, or miscellaneous metal work found embedded in the existing structures.
- B. The Contractor shall dismantle and remove all existing equipment, piping, and other appurtenances required for the completion of the work. Where called for or required, the contractor shall cut existing pipelines for the purpose of making connections thereto. Anchor bolts for equipment and structural steel removed shall be cut off one inch below the concrete surface. Surface shall be finished as specified in the Contract Documents.
- C. At the time that a new connection is made to an existing pipeline, additional new piping, extending to and including a new valve, shall be installed. Pipe anchorage, if required, is part of the installation shall also be installed as directed by the Engineer.
- D. No existing structure, equipment, or appurtenance shall be shifted, cut, removed, or otherwise altered except with the express approval of and to the extent approved by the Engineer.
- E. When removing materials or portions of existing utility pipelines and/or structures or when making openings in walls and partitions, the Contractor shall take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, and not to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.
- F. Materials and equipment removed in the course of making alterations and additions shall remain the property of the Owner, except that items not salvageable, as determined by the

Owner, shall become the property of the Contractor to be disposed of by him off the work site at his own place of disposal. Operating equipment shall be thoroughly cleaned, lubricated, and greased for protection during prolonged storage.

- G. All alterations to existing utility pipes and structures shall be done at such time and in such manner as to comply with the approved time schedule. So far as possible before any part of the work is started, all tools, equipment, and materials shall be assembled and made ready so that the work can be completed without delay.
- H. All workmanship and new materials involved in constructing the alterations shall conform to the General Specifications for the classes of work insofar as such specifications are applicable.
- I. All cutting of existing concrete or other material to provide suitable bonding to new work shall be done in a manner to meet the requirements of the respective section of these Specifications covering the new work. When not covered, the work shall be carried on in the manner and to the extent directed by the Resident Project Representative.
- J. Surfaces of seals visible in the completed work shall be made to match as nearly as possible the adjacent surfaces.
- K. Non-shrink grout shall be used for setting wall castings, sleeves, leveling pump bases, doweling anchors into existing concrete and elsewhere as shown.
- L. Where necessary or required for the purpose of making connections, the Contractor shall cut existing pipelines in a manner to provide an approved joint. Where required, he shall use flanges, or provide Dresser Couplings, all as required.
- M. The Contractor shall provide flumes, hoses, piping and other related items to divert or provide suitable plugs, bulkheads, or other means to hold back the flow of water or other liquids, all as required in the performance of the work under this Contract.
- N. Care shall be taken not to damage any part of existing buildings or foundations or outside structures.

### **3.02 CONNECTING TO EXISTING PIPING AND EQUIPMENT**

The Contractor shall verify exact location, material, alignment, joint, etc. of existing piping and equipment prior to making the connections called out in the Drawings. The verifications shall be performed with adequate time to correct any potential alignment or other problems prior to the actual time of connection. A City of Wauchula representative must be present for all tie-ins for a visual inspection.

### **3.03 REMOVAL AND ABANDONMENT OF ASBESTOS CEMENT PIPE AND APPURTENANCES**

- A. All work associated with the removal or abandonment of existing asbestos cement pipe and appurtenances shall be performed by a licensed asbestos abatement contractor or subcontractor registered in the State of Florida. After removal of the facilities, all trenches shall be backfilled in accordance with the Contract Documents. The cost of disposing of

the removed materials shall be borne by the Contractor.

- B. The asbestos abatement contractor or subcontractor shall contact the appropriate regulatory agencies prior to removal or abandonment of any asbestos material and shall obtain all required permits and licenses and issue all required notices. The Contractor shall be responsible for all fees associated with permits, licenses and notices to the governing regulatory agencies. An asbestos manifest form must accompany each and every shipment of such pipe or pipe material waste to landfill facility approved by Owner.
- C. All work associated with removal or abandonment of asbestos cement pipe and appurtenances shall be performed in accordance with the standards listed below and all other applicable local, State, or Federal standards.
  - 1. Florida Administrative Code, Chapter 62-257, "Asbestos Program".
  - 2. National Emission Standards Hazardous Air Pollution (NESHAP), 40 CFR, Part 61, Subpart M, latest revision.
  - 3. Occupational Safety and Health Act, 29 CFR, 1910.1001 - Asbestos.
  - 4. Title 40 CFR, Part 763, Asbestos.
  - 5. Florida Statute Title XXXII, Chapter 469, Asbestos Abatement.

### **3.04 ABANDONMENT OF EXISTING PIPE**

- A. All pipe is to be abandoned shall be capped or plugged with a fitting or material that will prevent soil or other material from entering the pipe. All caps and plugs shall be subject to approval by the Engineer.
- B. Provide grout with minimum 28 day compressive strength of 1000 psi, minimum slump of 5 inches, maximum slump of 9 inches. The grout mixture per cubic yard shall be:
  - 1. Cement - 500 pounds
  - 2. Fly Ash - 500 pounds
  - 3. Water - 350 pounds (42 gallons)
  - 4. Sand - 2248 pounds
  - 5. Air entrainment admixture (Darex or equal) - 3 ounces
  - 6. Bentonite - 6 pounds (to be mixed with sufficient water to form colloidal mixture, added at the job site)

All grout shall be mixed with a high shear, high energy colloidal type mixer to achieve the best uniform density. The grout shall be pumped with a non-pulsating centrifugal or tri-plex pump. The mixer shall be capable of continuous mixing. Batch mixing shall not be permitted.

**END OF SECTION**

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## SECTION 02100

### SITE PREPARATION

#### **PART 1 GENERAL**

##### **1.01 SCOPE OF WORK**

- A. This Section covers clearing, grubbing and stripping of the project site and/or along the pipeline route.
- B. The Contractor shall clear and grub all of the area within the limits of construction or as required, which includes, but is not limited to utility easements. The width of the area to be cleared shall be reviewed by the Owner prior to the beginning of any clearing.
- C. The Contractor's attention is directed to any Soil Erosion and Sediment Control Ordinances in force in City of Wauchula. The Contractor shall comply with all applicable sections of these ordinances.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION**

##### **3.01 CLEARING**

The surface of the ground, for the area to be cleared and grubbed shall be completely cleared of all timber, brush, stumps, roots, grass, weeds, rubbish and all other objectionable obstructions resting on or protruding through the surface of the ground. However, trees shall be preserved as hereinafter specified unless otherwise designated by the Engineer. Clearing operations shall be conducted so as to prevent damage to existing structures and installations and to those under construction, so as to provide for the safety of employees and others. Soil erosion control devices such as hay bales and silt fences shall be installed to satisfy all Federal, State and County requirements.

##### **3.02 GRUBBING**

Grubbing shall consist of the complete removal of all stumps, roots larger than 1-1/2 inches in diameter, matted roots, brush, timber, logs and any other organic or metallic debris not suitable for foundation purposes, resting on, under or protruding through the surface of the ground to a depth of 18 inches below the subgrade. All depressions excavated below the original ground surface for or by the removal of such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

##### **3.03 STRIPPING**

In areas so designated, topsoil shall be stockpiled. Topsoil so stockpiled shall be protected until it is placed as specified. The Owner shall have the option to receive all excess topsoil materials. The Contractor shall pay all equipment and labor cost to deliver excess top soil material to a remote site chosen by the Owner within a five mile radius of



the construction site. Should Owner not choose to receive any or all excess topsoil materials, the Contractor shall dispose of said material at no additional cost to Owner.

### **3.04 DISPOSAL OF CLEARED AND GRUBBED MATERIAL**

The Contractor shall dispose of all material and debris from the clearing and grubbing operation by hauling such material and debris off site. The cost of disposal (including hauling) of cleared and grubbed material and debris shall be considered a subsidiary obligation of the Contractor; the cost of which shall be included in the prices bid for the various classes of work.

### **3.05 PRESERVATION OF TREES**

Those trees which are not designated for removal by the Engineer shall be carefully protected from damage. The Contractor shall erect such barricades, guards and enclosures as may be considered necessary by him for the protection of the trees during all construction operation.

### **3.06 PRESERVATION OF DEVELOPED PRIVATE PROPERTY**

- A. The Contractor shall exercise extreme care to avoid unnecessary disturbance of developed private property adjacent to proposed project site. Trees, shrubbery, gardens, lawns and other landscaping, which are not designated by the Engineer to be removed, shall be replaced and replanted to restore the construction easement to the condition existing prior to construction.
- B. All soil preservation procedures and replanting operations shall be under the supervision of a nursery representative experienced in such operations.
- C. Improvements to the land such as fences, walls, outbuildings and other structures which of necessity must be removed shall be replaced with equal quality materials and workmanship.
- D. The Contractor shall clean up the construction site across developed private property directly after construction is completed upon approval of the Engineer.

### **3.07 PRESERVATION OF PUBLIC PROPERTY**

The appropriate paragraphs of these Specifications shall apply to the preservation and restoration of public lands, parks, rights-of-way, easements and all other damaged areas. This includes, but is not limited to the trimming of trees damaged by contractor's equipment.

**END OF SECTION**

## SECTION 02200

### EARTHWORK

#### PART 1 GENERAL

##### 1.01 DESCRIPTION OF WORK

- A. This Section includes digging of excavations for structures, piping and roadways; backfilling around structures and piping; shaping and contouring the ground surface to conform to established grades and elevations; compacting of earth or rock materials to specified densities; bracing, sheeting and shoring; dewatering; removal of surplus excavated materials; and related work as shown on the Drawings and as specified herein.

##### 1.02 DEFINITIONS

- A. Excavation: Removal of earth and rock to form cavities for the construction of foundations and structures and to form trenches for the installation of piping or conduits.
- B. Cavity: Formed by the removal of earth and rock.
- C. Earth: Unconsolidated material in the crust of the earth derived by weathering and erosion. Earth includes:
1. Materials of both inorganic and organic origin.
  2. Boulders less than 1/3 cubic yard in volume, gravel, sand, silt, and clay
  3. Materials which can be excavated with a backhoe, trenching machine, drag line, clam shell, bulldozer, highlift, or similar excavating equipment without the use of explosives, rockrippers, rock hammers, or jack hammers
- D. Rock: A natural aggregate of mineral particles connected by strong and permanent cohesive forces. Rock includes:
1. Limestone, sandstone, dolomite, granite, marble, and lava
  2. Boulders 1/3 cubic yard or more in volume
  3. Materials which cannot be excavated by equipment which is used to remove earth overburden without the use of explosives, rock rippers, rock hammers, or jack hammers
- E. Undercutting: Excavation of rock and unsuitable earth below the bottom of a foundation, structure, pipe or conduit to be constructed or installed.
- F. Subgrade: Undisturbed bottom of an excavation.
- G. Bedding: Earth placed in trench to support pipe and conduit.
- H. Backfill and Fill: Earth placed around structures from the bottom of an excavation to finished grade, or to the sub base of pavement. Earth placed in a trench from the top of bedding to finished grade, or to sub base of pavement.
- I. Structural Compact Fill: Required to establish the finished grade should consist of clean cohesion less fill comprising the SP to SP-SM unified soil classification or ASSHTO A-3 Classification. Each lift, which should not exceed 12 inches, should be uniformly compacted to not less than 95% of the modified proctor maximum density.

- J. Topsoil: Earth containing sufficient organic materials to support the growth of grass.

**1.03 JOB CONDITIONS**

- A. Carefully maintain bench marks, monuments and other reference points, and if disturbed or destroyed, replace as directed.
- B. Should the Contractor encounter unusual subsurface and/or latent conditions at the site, he shall immediately give notice to the Owner and Engineer of such conditions before they are disturbed.

**1.04 QUALITY ASSURANCE**

- A. Codes and Standards: Perform excavation and landfill work in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Testing and Inspection Service: The Owner will retain a Soils Engineer to perform soil testing and inspection service for quality control testing of earthwork operations. Tests revealing satisfactory results will be paid for by the Owner. The cost of tests revealing unsatisfactory results will be deducted from monies due to the Contractor.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Earth for Fill and Backfill: Earth used for fill or backfill shall be of such gradation and moisture content that it will compact to the specified density and remain stable.
- B. Pipe Bedding: Pipe bedding material for Type A-2 trenches shall be No. 57 crushed stone with gradation as noted in Table 1 of Section 901 of the FDOT Standard Specifications.
- C. Pipe Cover Material: Pipe cover material shall consist of durable particles ranging in size from fine to coarse (No. 200 to 1-inch) in size, in a substantially uniform combination. Unwashed bank run sand and crushed bank-run gravel will be considered generally acceptable. Bedding material may be used for cover material.
- D. Special Backfill: Special backfill shall be the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
GW	Well-graded gravels and gravel-sand mixtures, little or no fines
GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
SW	Well-graded sands and gravelly sands, little or no fines
SP	Poorly graded sands and gravelly sands, little or no fines

- E. Suitable Backfill: Suitable backfill shall be the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
GW	Well-graded gravels and gravel-sand mixtures, little or no fines

GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
GM	Silty gravels, gravel-sand-silt mixtures
GC	Clayey gravels, gravel-sand-clay mixtures
SW	Well-graded sands and gravelly sands, little or no fines
SP	Poorly graded sands and gravelly sands, little or no fines
SM	Silty sands, sand-silt mixtures
SC	Clayey sands, sand-clay mixtures
ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays

- F. Unsuitable Materials: Materials which are unsuitable for backfill include stones greater than 6-inches in their largest dimension, pavement, rubbish, debris, wood, metal, plastic, and the following soils, classified by the Unified Soil Classification System, ASTM D-2487:

Group Symbols	Typical Name
OL	Organic silts and organic silty clays of low plasticity
MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
CH	Inorganic clays of high plasticity, fat clays
OH	Organic clays of medium to high plasticity
PT	Peat, muck, and other highly organic soils

- G. Structural Compact Fill: Preparation of the subgrade prior to pond backfilling will necessitate removal and replacement of pond bottom silts as well as the very loose silty soils on the flanks of the pond (see the Geotechnical Report for further requirements). The entire tank footprint, plus a margin of at least 5 feet outside the foundation perimeter should be striped down to the existing pond bottom elevation including over-excavation of any accumulated sediments, followed by proof-rolling with heavy vibratory compaction equipment. The contractor should anticipate the excavation would extend to approximate EL +15 feet. Compaction should consist of no less than ten (10) complete coverages throughout the entire tank area plus a margin of not less than 5 feet beyond the tank perimeters. The perimeter foundation area for the tank structures should be densified at the bottom of footing elevation. Compaction should continue so as to develop a uniform density of not less than 95% of the modified proctor maximum dry density per ASTM D-1557. Compaction tests should be conducted at intervals of no less than 1 test for each 2500 square feet and each 50 foot of foundation perimeter at a depth of 1 foot and at the compacted subgrade elevation.

## **PART 3 EXECUTION**

### **3.01 PROTECTION OF EXISTING FACILITIES**

- A. Support and protect all poles, fences, utility pipes, wire, conduits, buildings and structures.
- B. Proceed with caution during excavation so the exact location of underground utilities and structures, both known and unknown, may be determined. Contractor shall be responsible for the repair of utilities and structures when broken or otherwise damaged.
- C. Wherever water, or other pipes or conduits cross the excavation, the Contractor shall support said pipes and conduits without damage to them and without interrupting this

Contract. The manner of supporting such pipes, or similar items, shall be subject to the approval of the Engineer.

- D. When utilities that have to be removed or relocated are encountered within the areas of operations, the Contractor shall notify the Owner in ample time for the necessary measure to be taken to prevent interruption of the service.
- E. The Contractor shall so conduct the work that no equipment, material, or debris will be placed or allowed to fall upon private property in the vicinity of the work, unless he shall have first obtained the property Owner's written consent to do so and shall have shown said written consent to the Owner.
- F. All excavated material shall be piled in a manner that will not obstruct driveways. Hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, or other utility controls shall be left unobstructed and accessible until the work is completed. Drainage ways shall be kept clear or other satisfactory provisions made for drainage.
- G. Natural watercourses shall not be obstructed, except where specifically permitted for the construction of outfall and subaqueous crossings.

### **3.02 CLEARING**

- A. Before excavating, clear and remove logs, stumps, brush, vegetation, rubbish, and other perishable matter from the project site.
- B. Do not remove or damage trees that do not interfere with the finished work. Completely remove trees required to be removed, including stumps and roots. Replace trees removed unnecessarily. Properly treat damaged trees which can be saved.

### **3.03 STRIPPING AND STOCKPILING TOPSOIL**

- A. Strip topsoil and vegetation from the areas to be excavated. Clean topsoil may be stockpiled for reuse; the Contractor shall coordinate with the Owner for location of excavated stockpiled materials.

### **3.04 EXCAVATING**

- A. Make excavations to elevations and dimensions necessary to permit bracing, sheeting, erection of forms, inspection of foundation and installation of piping or conduits. Excavate trenches to the required alignment, depth and width. Excavate trenches in advance of pipe and conduit installation only as far as necessary to provide proper alignment and grade. Plan trenching operations to cause a minimum of danger to adjacent property and a minimum of inconvenience to the public.
- B. The width of trenches at the top of the pipe shall be ample to permit the pipe to be laid and joined properly and to allow the backfill to be placed and compacted as specified. Maximum trench width shall be such that design loadings on pipe will not be exceeded. Trenches shall be of such extra width, when required, to permit the placement of supports, sheeting, bracing, and appurtenances.
- C. Depth of trenches shall be such as to allow installation of pipelines at the grades or elevations shown.

- D. Trees, boulders, and other surface encumbrances, located so as to create a hazard to anyone involved in the excavation work or who is in the vicinity of the work at any time during operations, shall be removed or made safe before excavating is begun.
- E. Contractor shall be responsible for the determination of the angle of repose of the soil in which the excavating is to be done. Excavate all slopes to at least the angle of repose except for areas where solid rock allows for line drilling or presplitting.
- F. Sides, slopes, and faces of all excavations shall meet accepted engineering requirements by scaling, benching, barricading, rock bolting, wire meshing or other equally effective means. Give special attention to slopes which may be adversely affected by weather or moisture content.
- G. Flatten the excavation sides when an excavation has water conditions, silty materials, loose boulders, and areas where erosion and slide planes appear.
- H. Shore or otherwise support sides of excavations in hard or compact soil when the excavation is more than five feet in depth. In lieu of shoring, the sides of the excavation above the five-foot level may be sloped to preclude collapse, but shall not be steeper than a one-foot rise to each 1/2-foot horizontal.
- I. Use diversion ditches, dikes, or other suitable means to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Do not allow water to accumulate in an excavation. If possible, the grade should be away from the excavation.
- J. Excavations shall be inspected by a competent Contractor's representative after every rainstorm or other hazard-increasing occurrence, and the protection against slides and cave-ins shall be increased if necessary.
- K. Do not store excavated or other material nearer than four feet from the edge of any excavation. Store and retain materials as to prevent materials from falling or sliding back into the excavation. Install substantial stop log or barricades when mobile equipment is utilized or allowed adjacent to excavations.

### **3.05 DEWATERING**

- A. Keep excavations free from water until foundations, structures, and piping are completed and will safely with stand forces generated by water. Provide sufficient dewatering equipment and make proper arrangements for the disposal of water from dewatering operation. Dewatering shall not damage property, create nuisances, or interfere with other work. Do not use sanitary sewers for the disposal of water from dewatering operations.

### **3.06 SHEETING**

- A. The Contractor has the option of sheeting excavations.
- B. Supporting systems, such as piling, cribbing, shoring, and bracing shall be designed by a qualified Contractor's representative and meet accepted engineering requirements. When tie rods are used to restrain the top of sheeting or other retaining systems, securely anchor the tie rods well back of the angle of repose. When tight sheeting or sheet piling is

used, assume full loading due to groundwater table, unless prevented by weep holes or drains or other means. Provide additional stringers, ties, and bracing to allow for any necessary temporary removal of individual supports.

- C. Materials used for sheeting, sheet piling, cribbing, bracing, shoring and underpinning shall be in good, serviceable condition. Timbers shall be sound, free from large or loose knots, and of proper dimensions.
- D. Take special precautions in sloping or shoring the sides of excavations adjacent to a previously backfilled excavation or a fill, particularly when the separation is less than the depth of the excavation. Pay particular attention to joints and seams of material comprising a face and to the slope of such seams and joints.
- E. If it is necessary to place or operate power shovels, derricks, trucks, materials, or other heavy objects on a level above or near an excavation, sheet-pile, shore, and brace the side of the excavation as necessary to resist the extra pressure due to such superimposed loads.
- F. If the stability of adjoining buildings or walls is endangered by excavations, provide shoring, bracing, or under pinning as necessary to ensure the safety of adjoining buildings or walls. Such shoring, bracing or under pinning shall be inspected daily or more often, as conditions warrant, by a competent Contractor's representative and the protection effectively maintained.
- G. The Contractor shall be held responsible for the sufficiency of all sheeting and bracing used, and for all damage to persons or property resulting from the improper quality, strength, placing, maintaining, or removing of the same. This includes damage to trees, sidewalks, and other property on the project site as well as on the private grounds.
- H. Drive sheeting ahead of excavation. Do not remove sheeting until the excavation backfill has reached within two feet of the top of the excavation, except that the lower course of sheeting may be removed from a double sheeted excavation. When sheeting is drawn, completely fill all cavities remaining in or adjoining the excavation. When sheeting is left in place, completely fill all cavities behind such sheeting.

### **3.07 ROCK REMOVAL**

- A. Rock, boulders or other hard, lumpy or unyielding materials encountered in trench bottoms shall be removed to a depth at least 12-inches below the bottom of any pipes to be installed. All rock and other hard foundation material under structures shall be freed of all loose material, cleaned, and cut to a firm surface; either level, stepped vertically and horizontally or serrated, as may be directed. All seams shall be cleaned out and filled with concrete or mortar.
- B. Blasting of rock or other hard to remove materials will not be permitted on this project.

### **3.08 SUBGRADES**

- A. Do not construct foundations, footings, slabs, or piping on loose soil, mud, or other unstable or unsuitable soil.

- B. Fill excess cuts under foundations, footings, and slabs with concrete.
- C. Fill excess cuts under piping with compacted bedding as specified in this Section.

### **3.09 FOUNDATION SOILS REMOVAL AND COMPACTION**

- A. In areas where buildings, structure foundations, and precast concrete tanks are located just below the surface, the site shall be proof rolled using a large vibratory roller (Dynapac CA-25 or equivalent). Proof rolling shall consist of at least ten overlapping passes. Water shall be added in order to achieve moisture content near optimum to facilitate compaction. Purpose of the proof rolling is to detect any areas of unstable or unsuitable soils as well as to density the near-surface soils. Materials which yield excessively during the proof rolling shall be undercut and replaced with well-compacted structural fill.
- B. The Owner will retain a Soils Engineer to be present during proof rolling operations to observe the proof rolling and recommend the nature and extent of any remedial work.
- C. In areas where foundations and pre stressed concrete tanks are located, preparation of the subgrade prior to pond backfilling will necessitate removal and replacement of pond bottom silts as well as the very loose silty soils on the flanks of the pond (see the Geotechnical Report for further requirements). The entire tank footprint, plus a margin of at least 5 feet outside the foundation perimeter should be striped down to the existing pond bottom elevation including over-excavation of any accumulated sediments, followed by proof-rolling with heavy vibratory compaction equipment. The contractor should anticipate the excavation would extend to approximate EL +15 feet. Compaction should consist of no less than ten (10) complete coverages throughout the entire tank area plus a margin of not less than 5 feet beyond the tank perimeters. The perimeter foundation area for the tank structures should be densified at the bottom of footing elevation. Compaction should continue so as to develop a uniform density of not less than 95% of the modified proctor maximum dry density per ASTM D-1557. Compaction tests should be conducted at intervals of no less than 1 test for each 2500 square feet and each 50 foot of foundation perimeter at a depth of 1 foot and at the compacted subgrade elevation.
- D. Any fill required to achieve finished grade in structural areas or used as structural compact fill shall be inorganic, non-plastic granular soil containing less than 10% material passing a No. 200 sieve. Fill shall be placed in level lifts not to exceed 12-inches loose thickness and compacted to a minimum of 95% of the modified Proctor maximum dry density as determined by ASTM Specification D-1557. In-place density tests will be performed on each lift to verify that the specified degree of compacting has been achieved.

### **3.10 BACKFILLING FOUNDATION AND STRUCTURE EXCAVATIONS**

- A. Remove debris and other unstable or unsuitable materials from excavations before backfilling is started.
- B. Backfill excavations in areas to be paved with Special Backfill. Place Special Backfill in 12-inch lifts. Compact each lift of backfill to not less than 100% of the maximum dry density as determined in accordance with AASHTO T99, Method A. Compaction shall be by hand tamping or approved mechanical tamping devices, or in larger excavations by approved rollers. Do not compact backfill by puddling, unless permitted by the Engineer.



- C. Backfill excavations not requiring Special Backfill with Suitable Material. Place backfill and fill materials in lifts no greater than 12-inches in loose depth. Place backfill and fill materials in lifts no greater than four inches in loose depth where hand tampers are used. Backfill and fill shall be within 2% of optimum moisture content. For soils containing less than 5% material passing a No. 200 sieve, moisture content may be increased to within 3% of optimum. Compact backfill and fill to not less than 95% of the maximum dry density. Compact backfill and fill for restoration of dirt driveways shall be not less than 100% of the maximum dry density for last lift. Tests for determination of maximum dry density shall meet the requirements of ASTM D698 Method C. Use compaction equipment which is suited to the soil being compacted.
- D. If suitable, use stored excavated material for backfill and fill. Provide additional material, if required, to complete backfill and fill. Additional backfill and fill material shall be provided at no additional cost to the Owner.
- E. Do not use the following materials for backfill:
  - 1. Unsuitable materials
  - 2. Materials which are too wet or too dry to be compacted to the densities specified in this Section
- F. Place the backfill and fill in a manner which will not overload foundations or structures. Place backfill and fill evenly on all sides of foundations and structures. Do not use equipment that will overload foundations or structures during filling or backfilling.
- G. Do all cutting, filling, and grading necessary to bring the entire area around foundations and outside of structures to the following subgrade levels:
  - 1. To the underside of the respective surfacing for walks and pavement
  - 2. To finished grade for lawns and planted areas within the project site.

### **3.11 BACKFILLING PIPING TRENCHES**

- A. Do not backfill trenches and excavations until all utilities have been inspected by the Owner's representative and until all underground utilities and piping systems are installed in accordance with the requirements of the specifications and the drawings.
- B. Remove debris and other unsuitable materials from excavations before backfilling is started.
- C. Place and tamp bedding and backfilling in a manner which will not damage pipe coating, wrapping, or encasement.
- D. Bedding procedures shall be as specified in the particular Section for the applicable pipe material.
- E. If bedding does not cover the pipe, place pipe cover material from the top of bedding to 12-inches over the pipe. Compact pipe cover material to the density required to allow backfill over the pipe cover material to be compacted to the density specified.
- F. Do not use the following materials for backfilling:

1. Unsuitable Materials
  2. Materials which are too wet or too dry to be compacted to the densities specified in this Section.
- G. If suitable, use stored excavated material for backfill and fill. Provide additional material, if required, to complete backfill and fill. Additional backfill and fill material shall be provided at no additional cost to the Owner. Backfill excavations in areas to be paved with Special Backfill. Place Special Backfill in 12-inch lifts. Compact each lift of backfill to not less than 100% of the maximum dry density as determined in accordance with AASHTO T99, Method A. Compaction shall be by hand tamping or approved mechanical tamping devices, or in larger excavations by approved rollers. Backfill and fill materials shall be within 2% of optimum moisture content. Do not compact backfill by puddling, unless permitted by the Engineer.
- H. Backfill trenches not requiring Special Backfill with Suitable Material. Place backfill and fill materials in lifts no greater than 12-inches in loose depth and compact to produce an adequate foundation for seeding. The top 4-inches of backfill shall not contain stones or other objects larger than 1-inch in maximum dimension. Mound backfill above finish grade to allow for settlement. Fill and restore any settlement of the backfill. Grade area to be restored to finish grade after settlement of backfill and immediately before restoration of vegetated areas.

### **3.12 SHELL BASE**

- A. Construction of a base course composed of shell shall be as specified in Section 250 of the FDOT Standard Specifications.

### **3.13 FINISH GRADING**

- A. Shape the surface of all earthwork to conform to the lines, grades, contours and cross-sections shown on the drawings. Hand dressing may be required in certain areas or in confined areas where equipment operation is restricted.
- B. In final shaping of the surface of the earthwork a tolerance of 0.1 foot above or below the plan elevation will be allowed with the following exceptions:
1. Earthwork shall be shaped to slope away from all buildings and structures.
  2. Earthwork shall be shaped to match adjacent pavement, curb, sidewalks, and similar appurtenances.
  3. Ditch bottoms and swales shall be shaped so that no water will be impounded except in areas designated for impoundment.

### **3.14 CLEANUP AND MAINTENANCE**

- A. Cleanup the job site as grading is completed. Remove excess earth, rock, bedding, materials, and backfill materials. Remove unused piping materials, structure components, and appurtenances. Restore items moved, damaged, or destroyed during construction.

- B. Maintain the job site until the work has been completed and accepted. Fill excavations which settle when settlement is visible. Restore items damaged by construction or improper restorations. Keep dust conditions to a minimum.

**3.15 STORAGE AND REMOVAL OF EXCAVATED MATERIAL**

- A. Suitable excavated material required for filling and backfilling operations may be stockpiled on the jobsite.
- B. Remove unsuitable materials from the job site as unsuitable materials are excavated. Remove surplus suitable materials from the job site as excavations are backfilled.
- C. Excavated suitable surplus materials shall remain the Owner's property and shall be stockpiled at the location(s) designated by the Owner.

**3.16 DUST CONTROL**

- A. The Contractor shall take all steps possible to prevent and reduce dust arising from the construction activity. The Contractor shall have adequate water trucks on the site at all times and water, as necessary, the areas where dust may arise. He shall cooperate fully with the Owner's Representative and water immediately when instructed to do so.

**END OF SECTION**

## SECTION 02260

### FINISH GRADING

#### PART 1 GENERAL

##### 1.01 WORK INCLUDED

- A. The Contractor shall finish grade sub-soil.
- B. The Contractor shall cut out areas to receive stabilizing base course materials for paving and sidewalks.
- C. The Contractor shall place, finish grade and compact top soil.

##### 1.02 PROTECTION

The Contractor shall prevent damage to existing fencing, trees, landscaping, natural features, bench marks, pavement and utility lines. Damage shall be corrected at no cost to the Owner.

#### PART 2 PRODUCTS

- A. Topsoil: Shall be friable loam free from subsoil, roots, grass, excessive amount of weeds or other organics, stones, and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. The Contractor may use topsoil stockpiles on site if they conform to these requirements.

#### PART 3 EXECUTION

##### 3.01 SUB-SOIL PREPARATION

- A. The Contractor shall rough grade sub-soil systematically to allow for a maximum amount of natural settlement and compaction. Uneven areas and low spots shall be eliminated. Debris, roots, branches or other organics, stones, and sub-soil shall be removed by the Contractor and disposed of in a manner consistent with the latest City of Wauchula Ordinances as well as any affected regulatory agency. Should contaminated soil be found, the Contractor shall notify the Engineer.
- B. The Contractor shall cut out areas to sub-grade elevation to stabilize base material for paving and sidewalks.
- C. The Contractor shall bring sub-soil to required profiles and contour grades gradually; and blend slopes into level areas.
- D. The Contractor shall slope the structure grade a minimum of two (2) inches in ten (10) feet unless indicated otherwise on the Drawings.
- E. The Contractor shall cultivate sub-grade to a depth of 3 inches where the topsoil is to be placed. He shall repeat cultivation in areas where equipment use has compacted sub-soil.

- F. The Contractor shall not make grade changes which causes water to flow onto adjacent lands.

### **3.02 PLACING TOPSOIL**

- A. The Contractor shall place topsoil in areas where seeding, sodding and planting is to be performed. He shall place from the following minimum depths, up to finished grade elevations:
  - 1. 6 inches for seeded areas
  - 2. 4-1/2 inches for sodded areas
  - 3. 24 inches for shrub beds
  - 4. 18 inches for flower beds
- B. The Contractor shall use topsoil in a dry state as determined by the Engineer. He shall place the material during dry weather.
- C. The Contractor shall use fine grade topsoil eliminating rough and low areas to ensure positive drainage. He shall maintain levels, profiles and contours of the sub-grades.
- D. The Contractor shall remove stone, roots, grass, weeds, debris, and other organics or foreign material while spreading the material.
- E. The Contractor shall manually spread topsoil around trees, plants and structures to prevent damage which may be caused by grading equipment.
- F. The Contractor shall lightly compact and place the topsoil.

### **3.03 SURPLUS MATERIAL**

- A. The Contractor shall remove surplus sub-soil and topsoil from site at his expense.
- B. The Contractor shall leave stockpile areas and entire job site clean and raked, ready for landscaping operations.

**END OF SECTION**

## SECTION 02276

### TEMPORARY EROSION AND SEDIMENTATION CONTROL

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The work specified in this Section consists of the design, provision, maintenance and removal of temporary erosion and sedimentation controls as necessary.
- B. Temporary erosion controls include, but are not limited to: grassing, mulching, netting, watering, and the reseeding of on-site surfaces and spoil and borrow area surfaces, interceptor ditches at ends of berms and other such work at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Engineer.
- C. Temporary sedimentation controls include, but are not limited to: silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which shall ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Engineer.
- D. The Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

##### 1.02 REFERENCE DOCUMENTS

- A. Florida Building Code.
- B. FDEP/COE Dredge and Fill Regulations and/or Permit as applicable.
- C. SWFWMD Permit Regulations and/or Permit as applicable.
- D. Florida Stormwater, Erosion and Sedimentation Control Inspector's Manual.

#### PART 2 PRODUCTS

##### 2.01 EROSION CONTROL

- A. Netting - fabricated of material acceptable to the Engineer.
- B. Seed and sod.

##### 2.02 SEDIMENTATION CONTROL

- A. Bales - clean, seed free cereal hay type.
- B. Netting - fabricated of material acceptable to the Engineer.
- C. Filter stone - crushed stone conforming to Florida Dept of Transportation specifications.

- D. Concrete block - hollow, non-load-bearing type.
- E. Concrete - exterior grade not less than one inch thick.

**PART 3 EXECUTION**

**3.01 EROSION CONTROL**

- A. Minimum procedures for grassing shall be:
  - 1. Scarify slopes to a depth of not less than six inches and remove large clods, rock, stumps, roots larger than 1/2 inch in diameter and debris.
  - 2. Sow seed within twenty-four (24) hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.
  - 3. Apply mulch loosely and to a thickness of between 3/4-inch and 1-1/2 inches.
  - 4. Apply netting over mulched areas on sloped surfaces.
  - 5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

**3.02 SEDIMENTATION CONTROL**

- A. The Contractor shall install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Deteriorated hay bales and dislodged filter stone shall be replaced by the Contractor at his expense.

**3.03 PERFORMANCE**

- A. The Contractor, at his own expense, shall immediately take whatever steps are necessary to correct any deficiencies of the temporary erosion and sediment control measures employed if they fail to produce results or do not comply with the requirements of the State of Florida or any other federal, governmental or regulatory agency.

**END OF SECTION**

## SECTION 02485

### SODDING

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials and equipment necessary to satisfactorily return all construction areas to their original conditions or better.
- B. Work shall include furnishing and placing seed or sod, fertilizing, planting, watering and maintenance until acceptance by Owner.

##### 1.02 RELATED WORK NOT INCLUDED

Excavation, filling and grading required to establish elevation shown on the Drawings are included under other sections of these Specifications.

##### 1.03 QUALITY ASSURANCE

- A. It is the intent of this Specification that the Contractor is obliged to deliver a satisfactory stand of grass as specified. If necessary, the Contractor shall repeat any or all of the work, including grading, fertilizing, watering and seeding or sodding at no additional cost to the Owner until a satisfactory stand is obtained. For purposes of grassing, a satisfactory stand of grass is herein defined as a full lawn cover over areas to be sodded or seeded, with grass free of weeds, alive and growing, leaving no bare spots larger than 3/4 square yard within a radius of 8 feet.
- B. All previously grassed areas where pipelines are laid shall be sodded. All sodding and grassing shall be installed in accordance with these Specifications or as directed by the Engineer.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Fertilizer: The fertilizer shall be of the slow-release type meeting the following minimum requirements: 12 percent nitrogen, 8 percent phosphorus, 8 percent potassium; 40 percent other available materials derived from organic sources. At least 50 percent of the phosphoric acid shall be from normal super phosphate or an equivalent source which will provide a minimum of two units of sulfur. The amount of sulfur shall be indicated on the quantitative analysis card attached to each bag or other container. Fertilizer shall be uniform in composition, dry and free flowing delivered to sites in original unopened containers bearing manufacturer's statement or guarantee.
- B. Sodding: Sod shall be provided as required on the construction drawings or at locations as directed by the Engineer in accordance with Florida Department of Transportation,



Specifications Section 575 and 981. The Contractor shall furnish bahia grass sod or match existing sod. Placement and watering requirements shall be in accordance with FDOT Specifications Section 575, except that no additional payment will be made for placement and/or watering. This cost shall be included in the Contract price bid for sodding.

- C. Topsoil: Topsoil stockpiled during excavation may be used as necessary. If additional topsoil is required to replace topsoil removed during construction, it shall be obtained off site at no additional cost to the Owner. Topsoil shall be fertile, natural surface soil, capable of producing all trees, plants and grassing specified herein.
- D. Water: It is the Contractor's responsibility to supply all water to the site, as required during seeding and sodding operations and through the maintenance period and until the work is accepted. The Contractor shall make whatever arrangements that may be necessary to ensure an adequate supply of water to meet the needs for his work. He shall also furnish all necessary hose, equipment, attachments and accessories for the adequate irrigation of lawns and planted areas as may be required. Water shall be suitable for irrigation and free from ingredients harmful to plant life.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. When the trench backfill has stabilized sufficiently, the Contractor shall commence work on lawns and grassed areas, including fine grading as necessary and as directed by the Engineer.
- B. Finish Grading: Areas to be seeded or sodded shall be finish graded, raked, and debris removed. Soft spots and uneven grades shall be eliminated. The Engineer shall approve the finish grade of all areas to be seeded or sodded prior to seed or sod application.
- C. Protection: Seeded and sodded areas shall be protected against traffic or other use by placing warning signs or erecting barricades as necessary. Any areas damaged prior to acceptance by the Owner shall be repaired by the Contractor as directed by the Engineer.

#### **3.02 CLEANUP**

Soil or similar materials spilled onto paved areas shall be removed promptly, keeping those areas as clean as possible at all times. Upon completion of seeding and sodding operations, all excess soil, stones and debris remaining shall be removed from the construction areas.

#### **3.03 LANDSCAPE MAINTENANCE**

- A. Any existing landscape items damaged or altered during construction by the Contractor shall be restored or replaced as directed by the Engineer.
- B. Maintain landscape work for a period of 90 days immediately following complete installation of work or until Owner accepts project. Watering, weeding, cultivating, restoration of grade, mowing and trimming, protection from insects and diseases, fertilizing and similar operations as needed to ensure normal growth and good health for

live plant material shall be included at no additional cost to the Owner.

**3.04**

**REPAIRS TO LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATORS**

Lawn areas planted under this Contract and all lawn areas damaged by the Contractor's operation shall be repaired at once by proper soil preparation, fertilizing and sodding, in accordance with these Specifications.

**END OF SECTION**

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## SECTION 02513

### ASPHALT CONCRETE PAVING

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials and equipment necessary to complete all milling asphalt pavement and asphalt concrete paving (including restoration of driveways) as called out on the Contract Documents or as shown on the Drawings.

##### 1.02 QUALITY ASSURANCE

- A. Qualifications of Asphalt Concrete Producer: The only materials permitted shall be furnished by a bulk asphalt concrete producer exclusively engaged in the production of hot-mix, hot-laid asphalt concrete.
- B. Qualification of Testing Agency: The Owner may employ a commercial testing laboratory to conduct tests and evaluations of asphalt concrete materials and design. The Contractor shall:
  - 1. Provide asphalt concrete testing and inspection service acceptable to Owner.
  - 2. Include sampling and testing asphalt concrete materials proposed, and tests and calculations for asphalt concrete mixtures.
  - 3. Provide field testing facilities for quality control testing during paving operations.
- C. Requirements of Regulatory Agencies: The Contractor shall comply with the applicable requirements of:
  - 1. City of Wauchula Code of Ordinances
  - 2. Hardee County Transportation Department
  - 3. Florida Department of Environmental Protection (FDEP)

##### 1.03 PAVING QUALITY REQUIREMENTS

- A. General: In addition to other specified conditions, the Contractor shall comply with the following minimum requirements:
  - 1. In-place asphalt concrete course shall be tested for compliance with requirements for density, thickness and surface smoothness.
  - 2. Final surface shall be provided of uniform texture, conforming to required grades and cross sections.
  - 3. A minimum of four inch diameter pavement specimens for each completed course shall be taken from locations as directed by the Engineer.
  - 4. Holes from test specimens shall be repaved as specified for patching defective work.
- B. Density:

1. When subjected to 50 blows of standard Marshall hammer on each side of an in place material specimen, densities shall be comparable to a laboratory specimen of same asphalt concrete mixture.
  2. The minimum acceptable density of in-place course material shall be 98% of the recorded laboratory specimen density.
- C. Thickness: In-place compacted thicknesses shall not be acceptable if less than the minimum thicknesses shown on the Drawings.
- D. Surface Smoothness:
1. Finished surface of each asphalt concrete course shall be tested for smoothness, using a 10 ft. straightedge applied parallel to and at right angles to centerline of paved areas.
  2. Surface areas shall be checked at intervals directed by Engineer.
  3. Surfaces shall not be acceptable if they exceed the following:
    - a. Base Course: 1/4 in. in 10 ft.
    - b. Surface Course: 3/16 in. in 10 ft.
    - c. Crowned Surfaces:
      - i. Test crowned surfaces with a crown template, centered and at right angles to the crown.
      - ii. Surfaces will not be acceptable if varying more than 1/4 in. from the template.

#### 1.04 SUBMITTALS

- A. Samples: The Contractor may be required to provide samples of materials for laboratory testing and job-mix design.
- B. Test Reports: The Contractor shall submit laboratory reports for following materials tests:
1. Coarse and fine aggregates from each material source and each required grading:
    - a. Sieve Analysis: ASTM C 136 (AASHTO T 27).
    - b. Unit Weight of Slag: ASTM C29 (AASHTO T 19).
    - c. Soundness: ASTM C 88 (AASHTO T 104) for surface course aggregates only.
    - d. Sand Equivalent: ASTM D 2419 (AASHTO T 176).
    - e. Abrasion of Coarse Aggregate: ASTM C131 (AASHTO T 96),for surface course aggregates only.
  2. Asphalt cement for each penetration grade:
    - a. Penetration: ASTM D5 (AASHTO T49).
    - b. Viscosity (Kinematic): ASTM D2170 (AASHTO T 201).
    - c. Flash Point: ASTM D92 (AASHTO T 48).
    - d. Ductility: ASTM D 113 (AASHTO T 51).
    - e. Solubility: ASTM D 4 (AASHTO T 44).
    - f. Specific Gravity: ASTM D 70 (AASHTO T 43).
  3. Job-mix design mixtures for each material or grade:
    - a. Bulk Specific Gravity for Coarse Aggregate: ASTM C 117(AASHTO T 85).
    - b. Bulk Specific Gravity for Fine Aggregate: ASTM C 128(AASHTO T 84).

4. Uncompacted asphalt concrete mix: Maximum Specific Gravity: ASTM D 2041

- (AASHO T 209).
5. Compacted asphalt concrete mix:
    - a. Bulk Density: ASTM D 1188 (AASHO T 166).
    - b. Marshall Stability and Flow: ASTM D 1559.
  6. Density and voids analysis:
    - a. Provide each series of asphalt concrete mixture test specimens, in accordance with A.I. MS-2 "Mix Design Methods for Asphalt Concrete".
    - b. Use Marshall method of mix design unless otherwise directed or acceptable to the Engineer.
    - c. Report the quantity of absorbed asphalt cement in pounds of dry aggregate, percent air voids, and percent voids in mineral aggregate.
  7. Sampling and testing of asphalt concrete mixtures for quality control during paving operations:
    - a. Uncompacted asphalt concrete mix.
      - i. Asphalt Cement Content: ASTM D 2172 (AASHO T 164).
      - ii. Penetration of Recovered Asphalt Cement: ASTM D 5(AASHO T 49).
      - ii. Ductibility of Recovered Asphalt Cement: ASTM D 113(AASHO T 51).
    - b. Compacted asphalt concrete mix:
      - i. Bulk Density: ASTM D 1188 (AASHO T 166).
      - Marshall Stability and Flow: ASTM D1559).
    - c. Perform at least one test for each day's paving.
  8. Asphalt plant inspection: ASTM D 290.
  9. Additional testing:
    - a. Retesting shall be required if previous tests indicate insufficient values, or if directed by the Engineer.
    - b. Testing shall continue until specified values have been attained.
  10. Asphalt concrete materials which do not comply with specified requirements shall not be permitted in the work.
- C. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

## 1.05 JOB CONDITIONS

- A. Weather Limitations:
1. Apply bituminous prime and tack coats only when the ambient temperature in the shade is 50 degrees F. and when the temperature has not been below 35 degrees F. for 12 hours immediately prior to application.
  2. Do not apply when the base surface is wet or contains an excess of moisture which would prevent uniform distribution and the required penetration.
  3. Construct asphalt concrete surface course only when atmospheric temperature is above 40 degrees F., when the underlying base is dry, and when weather is not rainy.
  4. Base course may be placed when air temperature is not below 30 degrees F. and rising, when acceptable to the Engineer.
- B. Grade Control: Establish and maintain the required lines and grades, including crown and

cross-slope, for each course during construction operations.

- C. Traffic Control: Maintain vehicular and pedestrian traffic during paving operations, as required for other construction activities.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Soil Cement or Shell Base Course: as specified in FDOT Section 270, "Material for Base and Stabilized Base", and as called for in the Contract Documents.
- B. Aggregate for Asphalt Concrete, General:
  - 1. Sound, angular crushed stone, crushed gravel, or crushed slag: ASTM D 692.
  - 2. Sand, stone, or slag screening: ASTM D 1073.
  - 3. Provide aggregate in gradations for various courses to comply with local highway standards.
- C. Surface Course Aggregates:
  - 1. Provide natural sand, unless sand prepared from stone, slag, or gravel or combinations are required to suit local conditions.
- D. Asphalt Cement: Comply with ASTM D 946 for 85-100 penetration grade.
- E. Prime Coat:
  - 1. Cut-back liquid asphalt.
  - 2. Medium-Curing type: ASTM D 2027, Grade MC-70.

### **2.02 ASPHALT-AGGREGATE MIXTURES**

- A. Job-mix criteria:
  - 1. Provide job-mix formulas for each required asphalt-aggregate mixture.
  - 2. Establish a single percentage of aggregate passing each required sieve size, a single percentage of asphalt cement to be added to aggregate, and a single temperature at which asphalt concrete is to be produced.
  - 3. Comply with the mix requirements of local governing highway standards.
  - 4. Maintain material quantities within allowable tolerances of the governing standards.

### **2.03 TRAFFIC AND PARKING MARKING MATERIALS**

- A. Traffic lane marking paint with chlorinated rubber base.
- B. Factory mixed, quick drying and non bleeding, FS TT-P-115C, Type III.
- C. Color: Driving Lane Dividers - White



No Parking Zone - Yellow  
Parking Dividers - White

**PART 3 EXECUTION**

**3.01 SURFACE PREPARATION**

A. Subbase Preparation:

1. The Contractor shall remove from the area all organic substance encountered to a depth of six or eight inches (6" or 8"), or to such depth and width as directed by the Engineer. The entire area shall be plowed and dragged prior to placing a stabilizing additive, if required to meet minimum bearing value.
2. Subbase shall be compacted to a minimum density of 98 percent of the maximum as determined by the Modified Proctor Density AASHTO T180, and shall have a minimum bearing value of 40 pounds per square inch as determined by the Florida Bearing Test.

B. Base Course:

1. Check subgrade for conformity with elevations and section immediately before placing base material.
2. Place base material in compacted layers not more than 6 inches thick, unless continuing tests indicate the required results are being obtained with thicker layers.
3. In no case will more than 8-inches of compacted base be placed in one lift.
4. Spread, shape, and compact all base material deposited on the subgrade during the same day.
5. Compact base course material to be not less than 95% of maximum density: ASTM D 1557, Method D (98 percent maximum density: AASHTO T-180).
6. Test density of compacted base course: ASTM D 2167.
7. Conduct one test for each 250 sq. yds. of in-place material, but in no case not less than one daily for each layer.

C. Loose and Foreign Material:

1. Remove loose and foreign material from compacted subbase surface immediately before application of paving.
2. Use power brooms or blowers, and brooming as required.
3. Do not displace subbase material.

D. Prime Coat:

1. Uniformly apply at rate of 0.20 to 0.5 gal. per sq. yd. over compacted and cleaned subbase surface.
2. Apply enough material to penetrate and seal, but not flood the surface.
3. Allow to cure and dry as long as required to attain penetration and evaporation of volatile, and in no case less than 24 hours unless otherwise acceptable to the Engineer.
4. Blot excess asphalt with just enough sand to prevent pick-up under traffic.
5. Remove loose sand before paving.

E. Tack Coat:

1. Dilute material with equal parts of water and apply to contact surfaces of previously constructed asphalt concrete or portland cement concrete and similar surfaces.
2. Apply at rate of 0.05 to 0.15 gal. per sq. yd. of surface.
3. Apply tack coat by brush to contact surfaces of structures projecting into or abutting asphalt concrete pavement.
4. Allow surfaces to dry until material is at condition of tackiness to receive pavement.

**3.02 MANHOLE FRAME / VALVE BOX ADJUSTMENTS (IF APPLICABLE)**

A. Placing Manhole frames:

1. Surround manhole frames set to elevation with a ring of compacted asphalt concrete base prior to paving.
2. Place asphalt concrete mixture up to 1 in. below top of frame, slope to grade, and compact by hand tamping.

B. Adjust manhole frames to proper position to meet paving.

C. If permanent covers are not in place, provide temporary covers over openings until completion of rolling operations.

D. Set cover manhole frames to grade, flush with surface of adjacent pavement.

**3.03 PREPARING THE MIXTURE**

A. Comply with ASTM D 995 for material storage, control, and mixing, and for plant equipment and operation.

B. Stockpiles:

1. Keep each component of the various-sized combined aggregates in separate stockpiles.
2. Maintain stockpiles so that separate aggregate sizes shall not be intermixed.

C. Heating:

1. Heat the asphalt cement at the mixing plant to viscosity at which it can be uniformly distributed throughout mixture
2. Use lowest possible temperature to suit temperature-viscosity characteristics of asphalt.
3. Do not exceed 350 degrees F. (176.6 degrees C.).

D. Aggregate:

1. Heat-dry aggregates to reduce moisture content to not more than 2.0%.
2. Deliver dry aggregate to mixer at recommended temperature to suit penetration grade and viscosity characteristics of asphalt cement, ambient temperature, and

- workability of mixture.
3. Accurately weigh or measure dry aggregates and weigh or meter asphalt cement to comply with job-mix formula requirements.
- E. Mix aggregate and asphalt cement to achieve 90-95% of coated particles for base mixtures and 85-90% of coated particles for surface mixture, when tested in accordance with ASTM D 2489.
- F. Transporting:
1. Transport asphalt concrete mixtures from mixing site in trucks having tight, clean compartments.
  2. Coat hauling compartments with a lime-water mixture to prevent asphalt concrete mixture from sticking.
  3. Elevate and drain compartment of excess solution before loading mix.
  4. Provide covers over asphalt concrete mixture when transporting to protect from weather and to prevent loss of heat.
  5. During periods of cold weather or for long-distance deliveries, provide insulation around entire truck bed surfaces.

### **3.04 EQUIPMENT**

- A. Provide size and quantity of equipment to complete the work specified within project time schedule.
- B. Bituminous Pavers: Self-propelled that spread hot asphalt concrete mixtures without tearing, shoving or gouging surfaces, and control pavement edges to true lines without use of stationary forms.
- C. Rolling Equipment:
1. Self-propelled, steel-wheeled and pneumatic-tired rollers that can reverse direction without backlash.
  2. Other type rollers may be used if acceptable to the Engineer.
- D. Hand Tools: Provide rakes, lutes, shovels, tampers, smoothing irons, pavement cutters, portable heaters, and other miscellaneous small tools to complete the work specified.

### **3.05 PLACING THE MIX**

- A. Place asphalt concrete mixture on prepared surface, spread and strike-off using paving machine.
- B. Spread mixture at a minimum temperature of 225 degrees F. (107.2 degrees C.).
- C. Inaccessible and small areas may be placed by hand.
- D. Place each course at thickness so that when compacted, it will conform to the indicated grade, cross-section, finish thickness, and density indicated.
- E. Paver Placing:

1. Unless otherwise directed, begin placing along centerline of areas to be paved on crowned section, and at high side of sections on one-way slope, and in direction of traffic flow.
2. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips.
3. Complete base courses for a section before placing surface courses.
4. Place mixture in continuous operation as practicable.

F. Hand Placing:

1. Spread, tamp, and finish mixture using hand tools in areas where machine spreading is not possible, as acceptable to Engineer.
2. Place mixture at a rate that will insure handling and compaction before mixture becomes cooler than acceptable working temperature.

G. Joints:

1. Carefully make joints between old and new pavements, or between successive days' work, to ensure a continuous bond between adjoining work.
2. Construct joints to have same texture, density and smoothness as adjacent sections of asphalt concrete course.
3. Clean contact surfaces free of sand, dirt, or other objectionable material and apply tack coat.
4. Offset transverse joints in succeeding courses not less than 24 inches.
5. Cut back edge of previously placed course to expose an even, vertical surface for full course thickness.
6. Offset longitudinal joints in succeeding courses not less than 6 inches.
7. When the edges of longitudinal joints are irregular, honeycombed, or inadequately compacted, cut back unsatisfactory sections to expose an even, vertical surface for full course thickness.

### 3.06 COMPACTING THE MIX

- A. Provide sufficient rollers to obtain the required pavement density.
- B. Begin rolling operations as soon after placing when the mixture will bear weight of roller without excessive displacement.
- C. Do not permit heavy equipment, including rollers to stand on finished surface before it has thoroughly cooled or set.
- D. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
- E. Start rolling longitudinally at extreme lower side of sections and proceed toward center of pavement. Roll to slightly different lengths on alternate roller runs.
- F. Do not roll centers of sections first under any circumstances.

- G. Breakdown Rolling:
  - 1. Accomplish breakdown or initial rolling immediately following rolling of transverse and longitudinal joints and outside edge.
  - 2. Operate rollers as close as possible to paver without causing pavement displacement.
  - 3. Check crown, grade, and smoothness after breakdown rolling.
  - 4. Repair displaced areas by loosening at once with lutes or rakes and filling, if required, with hot loose material before continuing rolling.
- A. Second Rolling:
  - 1. Follow breakdown rolling as soon as possible, while mixture is hot and in condition for compaction.
  - 2. Continue second rolling until mixture has been thoroughly compacted.
- I. Finish Rolling:
  - 1. Perform finish rolling while mixture is still warm enough for removal of roller marks.
  - 2. Continue rolling until roller marks are eliminated and course has attained specified density.
- J. Patching:
  - 1. Remove and replace defective areas.
  - 2. Cut-out and fill with fresh, hot asphalt concrete.
  - 3. Compact by rolling to specified surface density and smoothness.
  - 4. Remove deficient areas for full depth of course.
  - 5. Cut sides perpendicular and parallel to direction of traffic with edges vertical.
  - 6. Apply tack coat to exposed surfaces before placing new asphalt concrete mixture.

### **3.07 MARKING ASPHALT CONCRETE PAVEMENT**

- A. Cleaning:
  - 1. Sweep surface with power broom supplemented by hand brooms to remove loose material and dirt.
  - 2. Do not begin marking asphalt concrete pavement until acceptable to the Engineer.
- B. Apply paint with mechanical equipment.
  - 1. Provide uniform straight edges.
  - 2. Not less than two separate coats in accordance with manufacturer's recommended rates.

### **3.08 CLEANING AND PROTECTION**

- A. Cleaning: After completion of paving operations, clean surfaces of excess or spilled asphalt materials to the satisfaction of the Engineer.

B. Protection:

1. After final rolling, do not permit vehicular traffic on asphalt concrete pavement until it has cooled and hardened, and in no case sooner than 6 hours.
2. Provide barricades and warning devices as required to protect pavement.
3. Cover openings of structures in the area of paving until permanent coverings are placed (if applicable).

**END OF SECTION**

## SECTION 02575

### PAVEMENT REPAIR AND RESTORATION

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment, obtain County or State right-of-way permits and incidentals required and remove and replace pavements over trenches excavated for installation of water or sewer lines and appurtenances as shown on the Contract Drawings.

##### 1.02 GENERAL

- A. The Contractor shall take before and after photographs.
- B. The Contractor shall repair in a manner satisfactory to the County or State, all damage done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basin, flagstones, or stabilized areas or driveways and including all obstructions not specifically named herein, which results from this Project.
- C. The Contractor shall keep the surface of the backfilled area of excavation in a safe traffic bearing condition and firm and level with the remaining pavement until the pavement is restored in the manner specified herein. All surface irregularities that are dangerous or obstructive to traffic are to be removed. The repair shall conform to applicable requirements of Hardee County Transportation Department requirements for pavement repair and as described herein, including all base, subbase and asphalt replacement.
- D. All materials and workmanship shall meet or exceed the County requirements and as called for in the Contract Documents and nothing herein shall be construed as to relieve the Contractor from this responsibility.
- E. All street, road and highway repair shall be made in accordance with the FDOT and details indicated on the Drawings and in accordance with the applicable requirements and approval of affected County and State agencies.

#### PART 2 PRODUCTS

##### 2.01 PAVEMENT SECTION

- A. Asphaltic concrete shall consist of asphalt cement, coarse aggregate, fine aggregate and mineral filler conforming to FDOT Type S-III Asphalt. Pavement replacement thickness shall match that removed but in no case shall be less than 1-1/2" compacted thickness. All asphalt concrete pavement shall be furnished, installed and tested in accordance with FDOT Specifications for Road and Bridge Construction.
- B. Asphalt or crushed concrete or approved equal base material shall be furnished and installed under all pavement sections restored under this Contract. Asphalt base shall

have a minimum 6" compacted thickness, meet requirements for FDOT ABC III (Minimum Marshall Stability of 1000) and be furnished, installed and tested in accordance with the requirements of the FDOT Standards. Crushed concrete base shall be 10" minimum compacted thickness. Crushed concrete aggregate material shall have a minimum LBR of 140 compacted to 99% T-180 AASHTO density. Asphalt base and crushed concrete base are acceptable. Other bases shall be submitted for approval.

- C. Prime and tack will be required and applied in accordance with Section 300 - FDOT Specifications: Prime and Tack Coat for Base Courses.

## **PART 3 EXECUTION**

### **3.01 CUTTING PAVEMENT**

- A. The Contractor shall saw cut in straight lines and remove pavement as necessary to install the new pipelines and appurtenances and for making connections to existing pipelines.
- B. Prior to pavement removal, the Contractor shall mark the pavement for cuts nearly paralleling pipe lines and existing street lines. Asphalt pavement shall be cut along the markings with a rotary saw or other suitable tool. Concrete pavement shall be scored to a depth of approximately two (2) inches below the surface of the concrete along the marked cuts. Scoring shall be done by use of a rotary saw, after which the pavement may be broken below the scoring with a jackhammer or other suitable equipment.
- C. The Contractor shall not machine pull the pavement until it is completely broken and separated along the marked cuts.
- D. The pavement adjacent to pipe line trenches shall neither be disturbed or damaged. If the adjacent pavement is disturbed or damaged, irrespective of cause, the Contractor shall remove and replace the pavement. In addition, the base and sub-base shall be restored in accordance with these Specifications, Florida Dept. of Transportation Standard Specifications and as directed by the Owner.

### **3.02 PAVEMENT REPAIR AND REPLACEMENT**

- A. The Contractor shall repair, to meet or exceed original surface material, all existing concrete or asphaltic pavement, driveways, or sidewalks cut or damaged by construction under this Contract. He shall match the original grade unless otherwise specified or shown on the Drawings. Materials and construction procedures for base course and pavement repair shall conform to those of the Florida Dept. of Transportation.
- B. The Contractor's repair shall include the preparation of the subbase and base, place and maintain the roadway surface, any special requirements whether specifically called for or implied and all work necessary for a satisfactory completion of this work. Stabilized roads and drives shall be finished to match the existing grade. Dirt roads and drives shall have the required depth of backfill material as shown on the Contract Drawings.
- C. The width of all asphaltic concrete repairs shall extend the full width and length of the excavation or to the limits of any damaged section. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other approved method so as to provide a



clean edge to abut the repair. The line of the repair shall be reasonably uniform with no unnecessary irregularities.

**3.03 MISCELLANEOUS RESTORATION**

Sidewalks or driveways cut or damaged by construction shall be restored in full sections or blocks to a minimum thickness of four inches. Concrete curb or curb and gutter shall be restored to the existing height and cross section in full sections or lengths between joints. RCP pipe shall be repaired or installed in accordance with manufacturer's specifications. Grassed yards, shoulders and parkways shall be restored to match the existing sections with grass sod of a type matching the existing grass.

**3.04 SPECIAL REQUIREMENTS**

The restoration of all surfaces, as described herein, disturbed by the installation of pipelines shall be completed as soon as is reasonable and practical. The complete and final restoration of both paved and shell stabilized roads within a reasonable time frame is of paramount importance. To this end, the Contractor shall, as part of his work schedule, complete the restoration of any area of road within five weeks after removing the original surface. Successful leak testing shall be performed prior to restoring any area of road. All restoration and replacement or repairs are the responsibility of the Contractor.

**3.05 CLEANUP**

After all repair and restoration or paving has been completed, all excess asphalt, dirt and other debris shall be removed from the roadways. All existing storm sewers and inlets shall be checked and cleaned of any construction debris.

**3.06 MAINTENANCE OR REPAIR**

All wearing surfaces shall be maintained by the Contractor in good order suitable for traffic prior to completion and acceptance of the work.

**END OF SECTION**

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## SECTION 02999

### MISCELLANEOUS WORK AND CLEANUP

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. This Section includes items and operations which are not specified in detail as separate items, but may be sufficiently described as to the kind and extent of work involved. The Contractor shall furnish all labor, materials, equipment and incidentals necessary to complete all work under this Section.
- B. The work of this Section may include, but is not limited to the following:
1. Restoration of roads, sidewalks, driveways, curbing and gutters, fences, guardrails, lawns, shrubbery and any other existing items damaged or destroyed.
  2. Crossing utilities.
  3. Relocation of existing water, reclaim water, or sewer lines less than four inches diameter, water and sanitary sewer services, low pressure gas lines, telephone lines, electric lines, cable TV lines as shown on the Contract Drawings.
  4. Restoring easements (servitudes) and rights-of-way.
  5. Clean up.
  6. Incidental work (project photographs, testing, shop drawings, traffic control, record drawings, etc.).
  7. Excavation and Embankment - As defined in the Florida Department of Transportation Standard Specifications for Road and Bridge Construction (1991 Edition or latest revision).
  8. Stormwater and erosion control devices.

##### 1.02 SUBMITTAL OF LUMP SUM BREAKDOWN

Contractor shall submit to the Owner, a breakdown of the lump sum bid for Miscellaneous Work and Cleanup Item in the Proposal within 10 days after date of Notice to Proceed.

##### 1.03 WORK SPECIFIED UNDER OTHER SECTIONS

All work shall be completed in a workmanlike manner by competent workmen in full compliance with all applicable sections of the Contract Documents.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

Materials required for this Section shall equal or exceed materials that are to be restored. The Contractor may remove and replace or reuse existing materials with the exception of paving.

**PART 3 EXECUTION**

**3.01 RESTORING OF SIDEWALKS, ROADS, CURBING, FENCES AND GUARDRAILS**

- A. The Contractor shall protect existing sidewalks & curbing. If necessary, sidewalks & curbing shall be removed from joint to joint and replaced after backfilling. Curbing damaged during construction because of the Contractor's negligence or convenience, shall be replaced with sidewalks & curbing of equal quality and dimension at no cost to the Owner.
- B. At the locations necessary for the Contractor to remove, store and replace existing fences and guardrails during construction, the sections removed shall be only at the direction of the Owner. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced at no cost to the Owner with fencing equal to or better than that damaged and the work shall be satisfactory to the Owner.
- C. Guardrails in the vicinity of the work shall be protected from damage by the Contractor. Damaged guardrails shall be replaced in a condition equal to those existing
- D. Road crossings shall be restored in accordance with the Contract Documents and current FDOT Standards. Compensation for road restoration shall be included under the Road Restoration Bid Item if specified or under Miscellaneous Cleanup if it is not specified.

**3.02 CROSSING UTILITIES**

This item shall include any extra work required in crossing culverts, water courses, drains, water mains and other utilities, including all sheeting and bracing, extra excavation and backfill, or any other work required or implied for the proposed crossing, whether or not shown on the Drawings.

**3.03 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES AND CABLE TV LINES**

The Contractor shall notify the proper utility involved when relocation of these utility lines is required. The Contractor shall coordinate all relocation work by the utility so that construction shall not be hindered.

**3.04 RESTORING THE EASEMENTS AND RIGHTS-OF-WAY**

The Contractor shall be responsible for all damage to private property due to his operations. He shall protect from injury all walls, fences, cultivated shrubbery, pavement, underground facilities, including water, sewer and reclaimed water lines and services, or other utilities which may be encountered along the easement. If removal and replacement is required, it shall be done in a workmanlike manner, at his expense, so that the replacement are equivalent to that which existed prior to construction.

**3.05****STORMWATER AND EROSION CONTROL DEVICES**

The Contractor shall be responsible for, provide, and install all stormwater and erosion control devices necessary to insure satisfactory compliance with the Florida Department of Environmental Protection Stormwater, Erosion, and Sedimentation Control Inspector's Manual.

**END OF SECTION**

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## SECTION 09865

### SURFACE PREPARATION AND SHOP PRIME PAINTING

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required for the surface preparation and application of shop primers on ferrous metals, excluding stainless steels, as specified herein.

##### 1.02 SUBMITTALS

- A. Submit to the Engineer for approval, as provided in the Contract Drawings for shop drawings, manufacturer's specifications and data on the proposed primers and detailed surface preparation, application procedures and dry mil thickness.
- B. Submit representative physical samples of the proposed primers, if required by the Engineer.
- C. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Submerged Services: Shop primer for ferrous metals which will be subject to splash action or which are specified to be considered submerged service shall be sprayed with one coat of Koppers 654 epoxy Primer or Koppers Inertol Primer 621-FDA, dry film thickness 3.5 to 4.5 mils by Koppers Co., Inc., or equal.
- B. Nonsubmerged Services: Shop primer for ferrous metals other than those covered by paragraph 2.01 A shall be sprayed with one coat of Koppers Pug Primer, dry film thickness 3.0 to 4.0 mils by Koppers Co., Inc. or equal.
- C. Nonprimed Surfaces: Gears, bearing surfaces, and other similar surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating. This coating shall be maintained as necessary to prevent corrosion during all periods of storage and erection and shall be satisfactory to the Owner/Engineer up to the time of the final acceptance.
- D. Compatibility of Coating Systems: Shop priming shall be done with primers that are guaranteed by the manufacturer to be compatible with their corresponding primers and finish coats specified in the Contract Documents for use in the field and which are recommended for use together.

**PART 3 EXECUTION**

**3.01 APPLICATION**

A. Surface Preparation and Priming:

1. Non submerged components scheduled for priming, as defined above, shall be sandblasted clean in accordance with SSPC-SP-6, Commercial Grade, immediately prior to priming. Submerged components scheduled for priming, as defined above, shall be sandblasted clean in accordance with SSPC-SP-10. Near White, immediately prior to priming.
2. Surfaces shall be dry and free of dust, oil, grease, dirt, rust, loose mill scale and other foreign material before priming.
3. Shop prime in accordance with approved paint manufacturer's recommendations.
4. Priming shall follow sandblasting before any evidence of corrosion has occurred and within 24 hours.

**END OF SECTION**



## SECTION 09900

### PAINTING

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, tools, materials, equipment, scaffolding or other structures and incidentals necessary to complete this Contract in its entirety.
- B. The work includes painting and finishing of all new interior and exterior exposed items above and below grade and surfaces, such as structural steel, miscellaneous metals, ceilings, walls, floors, doors, frames, transoms, roof fans, construction signs, guardrails, posts, fittings, valves, tanks, equipment and all other work obviously required to be painted unless otherwise specified herein or on the Drawings. The omission of minor items in the Schedule of Work shall not relieve the Contractor of his obligation to include such items where they come within the general intent of the Specification as stated herein.
- C. The following items shall not be painted:
  - 1. Any code-requiring labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plates.
  - 2. Any moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts, unless otherwise indicated.
  - 3. Aluminum handrails (except where in contact with concrete) walkways, windows, louvers and grating unless otherwise specified herein.
  - 4. Signs and nameplates.
  - 5. Finish hardware.
  - 6. Chain link fence.
  - 7. Piping buried in the ground or embedded in concrete.
  - 8. Concealed surfaces of pipe or crawl space.
  - 9. Nonferrous metals, unless specifically noted otherwise.
  - 10. Electrical switchgear and motor control centers.
  - 11. Stainless steel angles, tubes, pipe, etc.
  - 12. Products with polished chrome, aluminum, nickel or stainless steel finish.
  - 13. Plastic switch plates and receptacle plates.
  - 14. Flexible couplings, lubricated bearing surfaces, insulation and metal and plastic pipe interior.
  - 15. Sprinkler heads.
  - 16. Lifting chain on cranes and hoists
  - 17. Electrical cable, festooned conductor system, cables, collector pole brackets, etc.
- D. All work shall be done in strict accordance with this Specification, the Design Drawings and the painting package, including manufacturer's printed instructions.
- E. The Contractor will obtain, at its own expense, all permits, licenses and inspections and shall comply with all laws, codes, ordinances, rules and regulations promulgated by

authorities having jurisdiction which may bear on the Work. This compliance will include Federal Public Law 91-596 more commonly known as the "Occupational Safety and Health Act of 1970".

## **1.02 DEFINITIONS**

- A. Field Painting is the painting of new or rebuilt items at the job site. Field painting shall be the responsibility of the Contractor.
- B. Shop Painting is the painting of new or rebuilt items in the shop prior to delivery to the jobsite.
- C. Abbreviations The abbreviations and definitions listed below, when used in this specification, shall have the following meanings:
  - 1. SSPC - Steel Structures Painting Council
  - 2. Exterior - Outside, exposed to weather
  - 3. Interior Dry - Inside, concealed or protected from weather
  - 4. Interior Wet - Inside, subject to immersion services
  - 5. ASTM - American Society of Test Materials
  - 6. NACE - National Association of Corrosion Engineers
  - 7. NSF - National Sanitation Foundation
  - 8. AWWA - American Water Works Association
- D. Dry Film Thickness shall be in Mils.

## **1.03 RESOLUTION OF CONFLICTS**

- A. It shall be the responsibility of the Contractor to arrange a meeting prior to the start of painting, or flooring installation between the Contractor, the Paint Manufacturer, whose products are to be used, and the Engineer. All aspects of surface preparation, application and coating systems as covered by this Specification will be reviewed at this meeting.
- B. Clarification shall be requested promptly from the Engineer when instructions are lacking, conflicts occur in the Specifications, or the procedure seems improper or inappropriate for any reason.
- C. Copies of all manufacturer's instructions and recommendations shall be furnished to the Engineer by the Painting Contractor.
- D. It shall be the responsibility of the Coating Manufacturer to have their factory representative meet in person with the Contractor and Owner/Engineer a minimum of three times during the job as a consultant on surface preparation, mil thickness of coating and proper application of coating unless meeting is determined to be unnecessary by the Owner/Engineer.

## **1.04 SUBMITTALS**

- A. Contractor shall submit catalog data and cut sheets for the painting system being used if

not the TNEMEC materials specified.

- B. Samples as detailed in 3.01 B shall be submitted regardless of system being used, showing each color to be used.
- C. Hazardous Material Disposal documentation shall be submitted if applicable.
- D. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

## **PART 2 PRODUCTS**

### **2.01 EQUIPMENT**

- A. Effective oil and water separators shall be used in all compressed air lines serving spray painting and sandblasting operations to remove oil or moisture from the air before it is used. Separators shall be placed as far as practicable from the compressor.
- B. All equipment for application of the paint and the completion of the work shall be furnished by the Contractor in first-class condition and shall comply with recommendations of the paint manufacturer.
- C. Contractor will provide free of charge to the Owner a "Nordson-Mikrotest" or "Positest" dry film thickness gauge for ferrous metal and an OG232 "Tooke" gauge or equal for non-ferrous and cementitious surface, to be used to inspect coatings by the Engineer and Contractor. The gauges may be used by the Contractor and returned each day to the Engineer. Engineer will return gauges to Contractor at completion of job.

### **2.02 MATERIALS**

- A. All materials specified herein are manufactured by the TNEMEC Company, Inc., North Kansas City, Missouri. These products are specified to establish standards of quality and are approved for use on this Project.
- B. Equivalent materials of other manufacturers may be substituted on approval of the Engineer. Requests for substitution shall include manufacturer's literature for each product giving the name, generic type, descriptive information and evidence of satisfactory past performance and an independent laboratory certification that their product meets the performance criteria of the specified materials.
- C. Abrasion - Fed. Test Method Std. No. 141, Method 6192, CS-17 Wheel, 1,000 grams load.
- D. Adhesion - Elcometer Adhesion Tester.
- E. Exterior Exposure - Exposed at 45 degrees facing the ocean (South Florida Marine Exposure)
- F. Hardness - ASTM D3363-74

- G. Humidity - ASTM D2247-68
- H. Salt Spray (Fog) - ASTM B117-73
- I. Substitutions which decrease the total film thickness, change the generic type of coating, or fail to meet the performance criteria of the specified materials shall not be approved. Prime and finish coats of all surfaces shall be furnished by the same manufacturer.
- J. All coatings to be shop applied must meet the requirements for volatile organic compounds (VOC) of not more than 3.5 lbs/gallon after thinning.
- K. Colors, where not specified, shall be as selected by the Engineer or their Representative.
- L. All coatings in contact with potable water need to be NSF Certified in accordance with ANSI/NSF Standard 61.
- M. All above ground potable water mains and appurtenances shall be painted safety blue.

### **PART 3 EXECUTION**

#### **3.01 INSPECTION OF SURFACES**

- A. Before application of the prime coat and each succeeding coat, all surfaces to be coated shall be subject to inspection by the Engineer. Any defects or deficiencies shall be corrected by the Contractor before application of any subsequent coating.
- B. Samples of surface preparation and of painting systems shall be furnished by the Contractor to be used as a standard throughout the job, unless omitted by the Engineer.
- C. When any appreciable time has elapsed between coatings, previously coated areas shall be carefully inspected by the Engineer, and where, in his opinion, surfaces are damaged or contaminated, they shall be cleaned and recoated at the Contractor's expense. Recoating times of manufacturer's printed instructions shall be adhered to.
- D. Coating thickness shall be determined by the use of a properly calibrated "Nordson-Mikrotest" "Positest" Coating Thickness Gauge (or equal) for ferrous metal or an OG232 "Tooke" Paint Inspection gauge (or equal) for non-ferrous and cementitious surfaces. Please note that use of the "Tooke" gauge is classified as a destructive test.

#### **3.02 SURFACE PREPARATION**

The surface shall be cleaned as specified for the paint system being used. All cleaning shall be as outlined in the Steel Structures Painting Council's Surface Preparation Specification, unless otherwise noted. If surfaces are subject to contamination, other than mill scale or normal atmospheric rusting, the surfaces shall be pressure washed, and acid or caustic pH residues neutralized, in addition to the specified surface preparation.

#### **3.03 STANDARDS FOR SURFACE PREPARATION**

- A. Chemical and/or Solvent Cleaning: Remove all grease, oil, salt, acid, alkali, dirt, dust, wax, fat, foreign matter and contaminates, etc. by one of the following methods: steam cleaning, alkaline cleaning, or volatile solvent cleaning.
- B. Hand Tool Cleaning: Removal of loose rust, loose mill scale and loose paint to a clean sound substrate by hand chipping, scraping, sanding and wire brushing.
- C. Power Tool Cleaning: Removal of loose rust, loose mill scale and loose paint to a clean sound substrate by power tool chipping, descaling, sanding, wire brushing and grinding.
- D. Flame Cleaning: Dehydrating and removal of rust, loose mill scale and some light mill scale by use of flame, followed by wire brushing.
- E. White Metal Blast Cleaning: Complete removal of all mill scale, rust, rust scale, previous coating, etc., leaving the surface a uniform gray-white color.
- F. Commercial Grade Blast Cleaning: Complete removal of all dirt, rust scale, mill scale, foreign matter and previous coating, etc., leaving only shadows and/or streaks caused by rust stain and mill scale oxides. At least 66% of each square inch of surface area is to be free of all visible residues, except slight discoloration.
- G. Brush-Off Blast Cleaning: Removal of rust scale, loose mill scale, loose rust and loose coatings, leaving tightly-bonded mill scale, rust and previous coatings. On concrete surfaces, brush-off blast cleaning shall remove all laitance, form oils and solid contaminates. Blasting should be performed sufficiently close to the surface so as to open up surface voids, bugholes, air pockets and other subsurface irregularities, but so as not to expose underlying aggregate.
- H. Pickling: Complete removal of rust and mill scale by acid pickling, duplex pickling or electrolytic pickling (may reduce the resistance of the surface to corrosion, if not to be primed immediately).
- I. Near-White Blast Cleaning: Removal of all rust scale, mill scale, previous coating, etc., leaving only light stains from rust, mill scale and small specks of previous coating. At least 95% of each square inch of surface area is to be free of all visible residues and the remainder shall be limited to slight discoloration.
- J. Power Tool Cleaning to Bare Metal: Complete removal of rust, rust scale, mill scale, foreign matter and previous coatings, etc., to a standard as specified on a Commercial Grade Blast Cleaning (SSPC-SP-6, NACE-3) by means of power tools that will provide the proper degree of cleaning and surface profile.
- K. Visual standards "Pictorial Surface Preparation Standards for Painting Steel Surfaces", and the National Association of Corrosion Engineer, "Blasting Cleaning Visual Standards" TM-01-70 and TM-01-75 shall be considered as standards for proper surface preparation.
- L. Oil, grease, soil, dust, etc., deposited on the surface preparation that has been completed shall be removed prior to painting according to Solvent Cleaning under this Specification.

- M. Weld flux, weld spatter and excessive rust scale shall be removed by Power Tool Cleaning as per these Specifications.
- N. All weld seams, sharp protrusions and edges shall be ground smooth prior to surface preparation or application of any coatings.
- O. All areas requiring field welding shall be masked off prior to shop coating, unless waived by the Engineer.
- P. All areas which require field touch-up after erection, such as welds, burnbacks, and mechanically damaged areas, shall be cleaned by thorough Power Tool as specified in these Specifications.
- Q. Touch-up systems will be same as original specification except that approved manufacturer's organic zinc-rich shall be used in lieu of inorganic zinc where this system was originally used. Also strict adherence to manufacturer's complete touch-up recommendations shall be followed. Any questions relative to compatibility of products shall be brought to the Engineer's attention; otherwise, Contractor assumes full responsibility.

### **3.03 PRETREATMENTS**

When specified, the surface shall be pretreated in accordance with the specified pretreatment prior to application of the prime coat of paint.

### **3.04 STORAGE**

Materials shall be delivered to the job site in the original packages with seals unbroken and with legible unmutated labels attached. Packages shall not be opened until they are inspected by the Engineer and required for use. All painting materials shall be stored in a clean, dry, well-ventilated place, protected from sparks, flame, direct rays of the sun or from excessive heat. Paint susceptible to damage from low temperatures shall be kept in a heated storage space when necessary. The Contractor shall be solely responsible for the protection of the materials stored by himself at the job site. Empty coating cans shall be required to be neatly stacked in an area designated by the Owner/Engineer and removed from the job site on a schedule determined by the Owner/Engineer. Owner/Engineer may request a notarized statement from Contractor detailing all materials used on the Project.

### **3.05 PREPARATION OF MATERIALS**

- A. Mechanical mixers, capable of thoroughly mixing the pigment and vehicle together, shall mix the paint prior to use where required by manufacturer's instructions; thorough hand mixing will be allowed for small amounts up to one gallon. Pressure pots shall be equipped with mechanical mixers to keep the pigment in suspension, when required by manufacturer's instructions. Otherwise, intermittent hand mixing shall be done to assure that no separation occurs. All mixing shall be done in accordance with SSPC Vol. 1, Chapter 4, "Practical Aspects, Use and Application of Paints" and/or with manufacturer's recommendations.

- B. Catalysts or thinners shall be as recommended by the manufacturer and shall be added or discarded strictly in accordance with the manufacturer's instruction.

**3.06 APPLICATION**

- A. Paint shall be applied only on thoroughly dry surfaces and during periods of favorable weather, unless otherwise allowed by the paint manufacturer. Except as provided below, painting shall not be permitted when the atmospheric temperature is below 50 deg F, or when freshly painted surfaces may be damaged by rain, fog, dust, or condensation, and/or when it can be anticipated that these conditions will prevail during the drying period.
- B. No coatings shall be applied unless surface temperature is a minimum of 5 deg above dew point; temperature must be maintained during curing.
- C. See coating schedule for actual coating systems to be used on this project.

**3.07 DEW POINT CALCULATION CHART**

DEW POINT CALCULATION CHART

Ambient Air Temperature - Fahrenheit

Relative Humidity	20	30	40	50	60	70	80	90	100	110	120
90%	18	28	37	47	57	67	77	87	97	107	117
85%	17	26	36	45	55	65	76	84	95	104	113
80%	16	25	34	44	54	63	73	82	93	102	110
75%	15	24	33	42	52	62	71	80	91	100	108
70%	13	22	31	40	50	60	68	78	88	96	105
65%	12	20	29	38	47	57	66	76	85	93	103
60%	11	20	27	36	45	55	64	73	83	92	101
55%	9	17	25	34	43	53	61	70	80	89	98
50%	6	15	23	31	40	50	59	67	77	86	94
45%	4	13	21	29	37	47	56	64	73	82	91
40%	1	11	18	26	35	43	52	61	69	78	87
35%	-2	8	16	23	31	40	48	57	65	74	83

SURFACE TEMPERATURE AT WHICH CONDENSATION OCCURS

Dew Point

Temperature at which moisture will condense on surface. No coatings should be applied unless surface temperature is a minimum of 5deg above this point. Temperature must be maintained during curing.

Example

If air temperature is 70 deg F and relative humidity is 65%, the dew point is 57 deg F. No

coating should be applied unless surface temperature is 62 deg F minimum.

- A. No coating shall be applied unless the relative humidity is below 85%.
- B. Suitable enclosures to permit painting during inclement weather may be used if provisions are made to control atmospheric conditions artificially inside the enclosure, within limits suitable for painting throughout the painting operations.
- C. Field painting in the immediate vicinity of, or on, energized electrical and rotating equipment, and equipment and/or pipes in service shall not be performed without the approval of the Engineer.
- D. Extreme care shall be exercised in the painting of all operable equipment, such as valves, electric motors, etc., so that the proper functioning of the equipment will not be affected.
- E. The Contractor's scaffolding shall be erected, maintained and dismantled without damage to structures, machinery, equipment or pipe. Drop cloths shall be used where required to protect buildings and equipment. All surfaces required to be clear for visual observation shall be cleaned immediately after paint application.
- F. Painting shall not be performed on insulated pipe within three (3) feet of insulation operations or on insulation whose covering and surface coat have not had time to set and dry. Painting shall not be performed on uninsulated pipe within one (1) foot of any type of connection until the connection has been made, except as directed by the Engineer.
- G. The prime coat shall be applied immediately following surface preparation and in no case later than the same working day. All paint shall be applied by brushing, paint mitt and roller, conventional spraying, or airless spraying, using equipment approved by the paint manufacturer.
- H. Each coat of paint shall be recoated as per manufacturer's instructions. Paint shall be considered recoatable when an additional coat can be applied without any detrimental film irregularities such as lifting or loss of adhesion.
- I. Surfaces that will be inaccessible after assembly shall receive either the full specified paint system or three shop coats of the specified primer before assembly.
- J. Finish colors shall be in accordance with the COLOR SCHEDULE and shall be factory mixed (i.e., there shall be no tinting by the Contractor, unless authorized by the Engineer).
- K. All edges and weld seams in immersion service shall receive a "stripe coat" (applied by brush) of the 2nd coat prior to application of the full 2nd coat.
- L. All open seams in the roof area of tanks shall be filled after application of the topcoat with a flexible caulking such as Sika Flex 1A.

### **3.08 WORKMANSHIP**

- A. The Contractor must show proof that all employees associated with this Project shall have



been employed by the Contractor for a period not less than six (6) months.

- B. Painting shall be performed by experienced painters in accordance with the recommendations of the paint manufacturer. All paint shall be uniformly applied without sags, runs, spots, or other blemishes. Work which shows carelessness, lack of skill, or is defective in the opinion of the Engineer, shall be corrected at the expense of the Contractor.
- C. The Contractor shall provide the names of at least three other projects of similar size and scope that they have successfully completed under their current company name.

### **3.09 APPLICATION OF PAINT**

#### **A. By Brush and/or Rollers**

1. Top quality, properly styled brushes and rollers shall be used. Rollers with a baked phenol core shall be utilized.
2. The brushing or rolling shall be done so that a smooth coat as nearly uniform in thickness as possible is obtained. Brush or roller strokes shall be made to smooth the film without leaving deep or detrimental marks.
3. Surfaces not accessible to brushes or rollers may be painted by spray, by dauber or sheepskins, and paint mitt.
4. It may require two coats to achieve the specified dry film thickness if application is by brush and roller.

#### **B. Air, Airless or Hot Spray**

1. The equipment used shall be suitable for the intended purpose, shall be capable of properly atomizing the paint to be applied and shall be equipped with suitable pressure regulators and gauges.
2. Paint shall be applied in a uniform layer, with a 50% overlap pattern. All runs and sags should be brushed out immediately or the paint shall be removed and the surface resprayed.
3. High build coatings should be applied by a cross-hatch method of spray application to ensure proper film thickness of the coating.
4. Areas inaccessible to spray shall be brushed; if also inaccessible to brush, daubs or sheepskins shall be used, as authorized by the manufacturer.
5. Special care shall be taken with thinners and paint temperatures so that paint of the correct formula reaches the receiving surface.
6. Nozzles, tips, etc., shall be of sizes and designs as recommended by the manufacturer of the paint being sprayed.
7. The first coat on concrete surfaces in immersion service should be sprayed and back rolled.

### **3.10 PROTECTION AND CLEANUP**

- A. It shall be the responsibility of the Contractor to protect at all times, in areas where painting is being done, floors, materials of other crafts, equipment, vehicles, fixtures, and finished surfaces adjacent to paint work. Cover all electric plates, surface hardware,

nameplates, gauge glasses, etc., before start of painting work.

- B. At the option of the Engineer during the course of this project, the Contractor will contain all spent abrasives, old paint chips, paint overspray and debris by means suitable to the Engineer, including, but not limited to, full shrouding of the area.
- C. If shrouding is required, the Contractor must provide a complete design of the intended shroud or cover. Care must be taken not to modify or damage the structure during the use of the shroud. If damage should occur, the Contractor is held responsible for all repairs.
- D. At completion of the work, remove all paint where spilled, splashed, spattered, sprayed or smeared on all surfaces, including glass, light fixtures, hardware, equipment, painted and unpainted surfaces.
- E. After completion of all painting, the Contractor shall remove from job site all painting equipment, surplus materials and debris resulting from this work.
- F. The Contractor is responsible for the removal and proper disposal of all hazardous materials from the job site in accordance with Local, State and Federal requirements as outlined by the Environmental Protection Agency.
- G. A notarized statement shall be presented to the Owner/Engineer that all hazardous materials have been disposed of properly including, but not limited to: name of disposal company, disposal site, listing of hazardous materials, weights of all materials, cost per pound and EPA registration number.

### **3.11 TOUCH-UP MATERIALS**

The Contractor shall provide at the end of the Project at least one (1) gallon of each generic topcoat in each color as specified by the Engineer for future touch-up. Two gallons may be required for (2) component materials.

### **3.12 ON-SITE INSPECTION**

During the course of this Project, the Owner/Engineer will reserve the option of incorporating the services of a qualified inspection service. The inspection service will be responsible for assuring the proper execution of this Specification by the successful Contractor.

### **3.13 STEEL - STRUCTURAL, TANKS, PIPES AND EQUIPMENT**

#### **A. EXTERIOR EXPOSURE (NON-IMMERSION)**

##### **1. System No. 73-1: Epoxy/High Build Urethane**

This system is highly resistant to abrasion, wet conditions, corrosive fumes and chemical contact. Provides 3-4 times the color and gloss retention of conventional

paints. Second coat to be same color or close to finish color. Specify Series 74 Endura-Shield for gloss finish.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

Shop Coat: Series 1 Omnithane Primer	2.5 - 3.5	
2nd Coat: N69-Color Hi-Build Epoxoline	2.0 - 3.0	
3rd Coat: 73-Endura-Shield III	<u>2.0 - 3.0</u>	
	Dry Film Thickness	6.5 - 9.5
	Minimum	7.5 Mils

2. System No. 73-2: High Build Urethane for Marginally Cleaned Surfaces or Topcoating Existing System and over OEM Systems

This system can be used over factory finish paint or cover non-sandblasted steel and offer the high performance of a urethane coating. Specify Series 74 Endura-Shield for gloss finish.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning or SSPC-SP3 Power Tool Cleaning

Shop Coat: Manufacturer Standard Primer (or existing coating)	1.5 - 2.0	
2nd Coat: 141 Epoxoline	3.0 - 5.0	
3rd Coat: 73-Color Endura-Shield	<u>2.0 - 3.0</u>	
	Dry Film Thickness	6.5 - 10.0
	Minimum	7.5 Mils

3. System 90-97: Zinc/Epoxy/Urethane

This system offers the added corrosion protection of a zinc rich primer. Series 90-97 Tneme-Zinc is an organic zinc-rich primer that can be used for field touch up of a zinc primer or for touch up of galvanized surfaces that are damaged.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

Shop Coat: 90-97 Tneme-Zinc	2.5 - 3.5	
2nd Coat: N69-Color Hi-Build Epoxoline	2.0 - 3.0	
3rd Coat: 73 Endurashield III	<u>2.0 - 3.0</u>	
	Dry Film Thickness	6.5 - 9.5
	Minimum	8.0 Mils

B. INTERIOR EXPOSURE (NON-IMMERSION)

1. System No. 69.1: High Solids Epoxy

This coating will provide maximum protection. It offers chemical and corrosion resistance for long-term protection against salt spray, moisture, corrosive fumes, and chemical attack. Series 69 is a polyamidoamine cured epoxy. Primer coat

must be touched-up before second coat is applied.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

Shop Coat:N69-1211 Epoxoline Primer II	3.0 - 5.0		
2nd Coat: N69-Color Hi-Build Epoxoline II	<u>4.0 - 6.0</u>		
		Dry Film Thickness	7.0 - 11.0
		Minimum	9.0 Mils

2. System No.66-2: High Build Epoxy

This system will provide chemical and corrosion resistance against abrasion, moisture, corrosion fumes, chemical contact and immersion in non-potable water. Primer coat must be touched-up before second coat is applied. Substitute Series 161 for low temperature cure or quick recoats.

Surface Preparation: SSPC-SP6 Commercial Blast Cleaning

Shop Coat: N69-1211 Epoxoline Primer	3.0 - 5.0		
2nd Coat: N69-Color Hi-Build Epoxoline	<u>4.0 - 6.0</u>		
		Dry Film Thickness	7.0 - 11.0
		Minimum	9.0 Mils

C. IMMERSION

1. System No. 69-2: High Solids Epoxy (Non-Potable Water)

This system provides maximum protection in immersion service. Scarify the surface before topcoating if the Series N69 has been exterior-exposed for 90 days or longer. If primer coat is damaged, it must be touched-up before second coat is applied.

Surface Preparation: SSPC-SP10 Near-White Blast Cleaning

Shop Coat:N69-1211 Hi-Build Epoxoline II	3.0 - 5.0		
2nd Coat: N69-Color Hi-Build Epoxoline II	<u>6.0 - 8.0</u>		
		Dry Film Thickness	9.0 - 13.0
		Minimum	11.0 Mils

2. System No. N140: High Solids Epoxy (Potable Water)

Series N140 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61.

Surface Preparation: SSPC-SP10 Near-White Blast Cleaning

Shop Coat: N140-1255 Pota-Pox II (Beige)	6.0 - 8.0		
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2nd Coat: N140-WH02 Pota-Pox II (Tank White) 6.0 - 8.0  
 Dry Film Thickness 12.0 - 16.0  
 Minimum 14.0 Mils

3. System No. 46-30: Coal Tar-Epoxy (Non-Potable Water Only)

May be applied in a two-coat application. Review critical recoat time if utilized.

Surface Preparation: SSPC-SP10 Near-White Blast Cleaning\*

One Coat: 46H-413 Hi-Build Tneme Tar

Minimum Dry Film Thickness 14.0 - 20.0

\*SSPC-SP-6 Commercial Blast Cleaning may be used for non-immersion service.

**3.14 DUCTILE IRON PIPE**

A. EXTERIOR/INTERIOR EXPOSURE (NON-IMMERSION)

System No.141-3: Epoxy-Polyamide

This system can be applied directly to mill coated steel pipe without sandblasting for use in non-immersion. There may be some bleed through with the 1st coat. Do not apply over glossy varnish type mill coatings.

Surface Preparation: Surface shall be clean and dry.

1st Coat: 141-1211 Epoxoline Primer 3.0 - 4.0

2nd Coat: 141-Color Hi-Build Epoxoline 4.0 - 6.0

3rd Coat: (If required) (4.0 - 6.0)

Dry Film Thickness 11.0 - 16.0  
 Minimum 11.0 Mils

**3.15 GALVANIZED STEEL - PIPE AND MISCELLANEOUS FABRICATIONS**

A. EXTERIOR / (NON-IMMERSION)

System No. 73-1: Epoxy/High Build Urethane

Series 66 has excellent adhesion to galvanized steel. This system is highly resistant to abrasion, wet conditions, corrosive fumes and chemical contact. Provides 3-4 times the color and gloss retention of conventional paints. First coat to be same color as or close to the finish color. Specify Series 74 Endura-Shield for gloss finish.

Surface Preparation: SSPC-SP1 Solvent Cleaning followed by Hand or Power Sanding to Scarify

1st Coat: N69-Color Hi-Build Epoxoline	2.0 - 4.0		
2nd Coat: 73-Color Endura-Shield	<u>2.0 - 4.0</u>		
		Dry Film Thickness	4.0 - 8.0
		Minimum	5.0 Mils

B. INTERIOR EXPOSURE (NON IMMERSION) AND ALUMINUM IN CONTACT WITH CONCRETE

System No. N69-6: Polyamine Epoxy

Surface Preparation: SSPC-SP1 Solvent Cleaning followed by Hand or Power Sanding to Scarify

1st Coat: N69-Color Hi-Build Epoxoline	2.0 - 4.0		
2nd Coat: N69-Color Hi-Build Epoxoline	<u>2.0 - 4.0</u>		
		Dry Film Thickness	4.0 - 8.0
		Minimum	5.0 Mils

C. IMMERSION (POTABLE WATER)

System No. N140-1: Epoxy-Polyamide (Potable Water)

Series N140 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61. Substitute Series N140 for low temperature cure of quick recoat.

Surface Preparation: SSPC-SP 7 Brush Off Blast Cleaning

1st Coat: N140-1255 Pota-Pox Primer	3.0 - 5.0		
2nd Coat: N140-00WH Pota-Pox Finish	<u>4.0 - 6.0</u>		
		Dry Film Thickness	7.0 -11.0
		Minimum	9.0 Mils

**3.16 CHAIN-LINK FENCES**

A. GALVANIZED STEEL & NON-FERROUS METAL

System No. 22-1: Oil-Cementitious

Surface Preparation: Surface shall be clean and dry

One Coat: 22-Color Galv-Gard

Dry Film Thickness 3.0 - 4.0

**3.17 CONCRETE**

A. EXTERIOR - ABOVE GRADE

1. System No. 6-1: Acrylic Emulsion Low Sheen

If semi-gloss finish is desired, use Series 1029 Enduratone as the second coat.

Surface Preparation: Surface must be clean and dry.

1st Coat: 6-Color Tneme-Cryl	2.0 - 3.0		
2nd Coat: 6-Color Tneme-Cryl	<u>2.0 - 3.0</u>		
		Dry Film Thickness	4.0 - 6.0
		Minimum	5.0 Mils

2. System No. 156-1: Modified Acrylic Elastomer

If texture is needed, use 157 Enviro-Crete TX (medium texture) For application over previously applied coatings, use TNEMEC Series 151 Elasto-Grip at 1.0 - 2.5 mils DFT prior to the application of Series 156 Enviro-Crete.

Surface Preparation: Surface must be clean and dry.

1st Coat: 156-Color Enviro-Crete	4.0 - 8.0		
2nd Coat: 156-Color Enviro-Crete	<u>4.0 - 8.0</u>		
		Dry Film Thickness	8.0 - 16.0
		Minimum	10.0 Mils

B. EXTERIOR - BELOW GRADE

1. System No. 46H-31: Coal Tar-Epoxy

Surface Preparation: Surface shall be clean and dry.

One Coat: 46H-413 Hi-Build Tneme-Tar		Dry Film Thickness	14.0 - 20.0
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2. System No. 100-1: Crystalline Waterproofing

This system can be applied to concrete that is still wet or has not developed final cure. It can be used where wet surface conditions exist or where there is the potential for water intrusion due to hydrostatic pressure. Application shall be per Xypex specification manual.

Surface Preparation: Surface to be clean and roughened by Brush Blasting or Acid Etching.

1st Coat: XYPEX Concentrate at 1.5 lbs/SY	
2nd Coat: XYPEX Modified at 1.5 lbs/SY	

C. EXTERIOR/INTERIOR EXPOSURE (NON-IMMERSION)

1. System No. 6-1: Acrylic Emulsion, Low Sheen (Interior/Exterior)

This system will provide a decorative coating with good exterior durability, color retention, and a high vapor transmission rate. For Semi-Gloss finish, use 7-Color Tneme-Cryl S/G.

Surface Preparation: Surface shall be clean and dry. Allow concrete to cure for 28 days.

1st Coat: 6-Color Tneme-Cryl	2.0 - 3.0		
2nd Coat: 6-Color Tneme-Cryl	<u>2.0 - 3.0</u>		
		Dry Film Thickness	4.0 - 6.0
		Minimum	5.0 Mils

2. System No. N69-4: Epoxy-Polyamide (Interior/Exterior)

Series N69 provides excellent protection from abrasion, moisture, corrosive fumes and chemical contact. For exterior exposures, topcoat with Series 73, or 74 Endura-Tone for gloss and color retention.

Surface Preparation: Surfaces shall be clean and dry. Allow concrete to cure for 28 days. All surfaces must be clean and dry

Fill Voids and Bugholes using Tnemec Series 215 Surfacing Epoxy

1st Coat: N69-Color Hi-Build Epoxoline	3.0 - 5.0		
2nd Coat: N69-Color Hi-Build Epoxoline	<u>4.0 - 6.0</u>		
		Dry Film Thickness	7.0 -11.0
		Minimum	9.0 Mils

D. IMMERSION - POTABLE & NON-POTABLE WATER

1. System No. 446-5: Moisture Cured Urethane (Non-Potable Water)

Surface Preparation: Sweep abrasive blasting to remove laitance, fines, curing compounds, form release oils, open voids and bugholes and produce a surface profile equal to ICRI CSP 5.

Resurface all concrete and fill all voids and bugholes using Tnemec Series 218 @ 1/16"

1st Coat: 104-1255 H.S. Epoxy Primer	6.0 - 10.0
2nd Coat: 104 Color H.S. Epoxy	<u>6.0 - 10.0</u>



Dry Film Thickness 12.0 - 20.0  
Minimum 14.0 Mils

2. System No. N140-2 Epoxy-Polyamide (Potable Water)

This system meets American Water Works Association AWWA D 102 Inside System No. 1. Series 20 meets the new requirements of approval for potable water use as established by the National Sanitation Foundation Standard 61. Surface irregularities and bug holes should be filled to a smooth uniform appearance as required with TNEMEC Series 63-1500 Filler and Surfacer. (NSF Standard 61 approved). Substitute Series FC20 for low temperature cure or quick recoats.

Surface Preparation: Sweep abrasive blasting to remove laitance, fines, curing compounds, form release oils, open voids and bugholes and produce a surface profile equal to ICRI CSP 5.

Resurface all concrete and fill all voids and bugholes using Tnemec Series 218 @ 1/16"

1st Coat: N140-00WH White Pota-Pox	4.0 - 6.0
2nd Coat: N140-15BL Tank White Pota-Pox Finish	<u>4.0 - 6.0</u>
	Dry Film Thickness 8.0 - 12.0
	Minimum 10.0 Mils

E. INTERIOR EXPOSURE (NON-IMMERSION)

1. System No. 113-1: Acrylic-Epoxy Semi-Gloss

This system will provide high performance and can be applied directly over existing coatings without lifting. Can be used when low odor is required during application. Specify Series 114 Tneme-Tuffcoat for Gloss Finish.

Surface Preparation: Surface must be clean and dry.

One Coat: 113-Color Tneme-Tuffcoat	Dry Film Thickness 4.0 - 6.0
	Dry Film Thickness 12.0 - 16.0
	Minimum 14.0 Mils

**3.23 PVC PIPE**

A. EXTERIOR OR INTERIOR

System No. 66-23: Epoxy-Polyamide

Optional topcoat of Series 72/73Endura-Shield would give long-term color and gloss retention for exterior exposure.

Surface Preparation: Surface shall be clean and dry.

One Coat: 66-Color Hi-Build Epoxoline

Dry Film Thickness -3.0-4.0

**3.24 INSULATED PIPE**

A. INTERIOR EXPOSURE

System No. 6-1: Acrylic Emulsion, Low Sheen

For semi-gloss finish, use 1029-Color Enduratone

Surface Preparation: Surface shall be clean and dry.

1st Coat: 6-Color Tneme-Cryl

2nd Coat: 6-Color Tneme-Cryl

2.0 - 3.0

2.0 - 3.0

Dry Film Thickness 4.0 - 6.0

Minimum 5.0 Mils

**3.31**

**END OF SECTION**

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## SECTION 09902

### PIPE AND EQUIPMENT PAINTING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION OF WORK

- A. This Section includes pipe painting and identification as required for this project.

##### 1.02 SUBMITTALS

- A. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

#### PART 2 PRODUCTS

##### 2.01 PAINTING AND IDENTIFICATION

- A. Exposed piping (except stainless steel) shall be painted. Metal, ductile Iron, and plastic pipe shall be coated per Specification 09900 - Painting.
- B. General Notes and Guidelines:
1. All color numbers and names herein refer Tnemec to master color card. Colors of specified equal manufacturers may be substituted with approval of the Engineer.
  2. Pipe lines, equipment, or other items which are not listed here shall be assigned a color by the Engineer and shall be treated as an integral part of the Contract.
  3. When color coding is specified or directed by the Engineer, it shall consist of color code painting and identification of all exposed conduits, through lines and pipelines for the transport of gases, liquids, or semi-liquids including all accessories such as valves, insulated pipe coverings, fittings, junction boxes, bus bars, connectors and any operating accessories which are integral to a whole functional mechanical pipe and electrical conduit systems.
  4. Description on titles (Abbreviated Code on Pipe/Equipment) to be lettered on pipes or equipment will be black or white to contrast with color of pipes and equipment and shall be stenciled applied, as approved by the Engineer.
  5. All moving parts, drive assemblies, and covers for moving parts which are potential hazards shall be Safety Orange 04SF.
  6. All safety equipment shall be painted in accordance with OSHA

standards.

7. All inline equipment and appurtenances not assigned another color shall be painted the same base color as the piping. The pipe system shall be painted with the pipe color up to but not including the flanges attached to pumps and mechanical equipment assigned another color.
8. All pipe hangers and pipe support floor standards shall be painted.
9. All conduits shall be painted to match its background surface.
10. Building surface colors shall be painted as scheduled in the Finish Schedule or as selected by the Engineer.
11. Doors and frames shall be painted as scheduled in The Finish Schedule or as selected by the Engineer.
12. Wood casework, frames, doors, etc. shall be finished with urethane as specified except as specifically noted otherwise.

## 2.02 PAINT COLOR CODE SCHEDULE

- A. In situations where two colors do not have sufficient contrast to easily differentiate between them, a six-inch band of contrasting color should be painted on one of the pipes at approximately 30-inch intervals. The name of the liquid or gas should also be painted (stenciled) on the pipe in a contrasting color. In some cases, it may be advantageous to paint arrows indicating the direction of flow.

### COLOR OF PIPE AND EQUIPMENT

DESCRIPTION OF TITLE TO BE LETTERED ON PIPES AND EQUIPMENT	TITLE LETTERS	COLOR NAME	COLOR NUMBER
<u>PIPES</u>			
RAW WASTEWATER PIPE	WHITE	LIGHT GRAY	A0385
S. STEEL AIR PIPE APPURTENANCES	BLACK	SILVER	MATCH S. STEEL
SCUM PIPE	WHITE	APRIL GREEN	J8187
WASTE SLUDGE PIPE	WHITE	TAN BARK	J6512

SUMP PUMP PIPE	WHITE	LIGHT GRAY	A0385
CHLORINE PIPE AND HEADER	BLACK	SAFETY YELLOW	02SF
EFFLUENT REUSE PIPE	WHITE	PANTONE PURPLE	R3910
CHLORINE SAMPLE PIPE	BLACK	SAFETY YELLOW	02SF
POLYMER PIPE	BLACK	ORIENTAL YELLOW	D0852
THICKENED WASTE SLUDGE PIPE	WHITE	ANTIQUÉ BROWN	L9398
COLD WATER	BLACK	AZURE	J8162
HOT WATER	BLACK	AZURE	J8162
SOIL PIPES	WHITE	LIGHT GRAY	A0385
FUEL PIPE	WHITE	SAFETY RED	06SF
WASTE AND VENT PIPES (INTERIOR)	WHITE	MATCH BACKGROUND	

HYDRANTS

Classifications and Markings of Municipal Fire Hydrants				
Classification	Fire Flow	Barrel Color	Top and Nozzle Cap Colors	Pressure
Class AA	1,500 gpm (5680 L/min) or greater	Chrome Yellow	Light Blue	20 psi(140kPa)
Class A	1,000-1499gpm (3,785-5,675 L/min) or greater	Chrome Yellow	Green	20 psi(140kPa)
Class B	500-999 gpm (1,900-3,780 L/min)	Chrome Yellow	Orange	20 psi(140kPa)
Class C	500 gpm (1,900 L/min) or less	Chrome Yellow	Red	20 psi(140kPa)

**2.02 PAINTING OF EXISTING STRUCTURES, PIPING, VALVING AND EQUIPMENT**

- A. Touch up existing structures and equipment where finish has been damaged by new construction.

**PART 3 EXECUTION ( NOT USED)**

**END OF SECTION**

## SECTION 15050

### PIPE AND PIPE FITTINGS - GENERAL STATEMENT

#### PART 1 GENERAL

##### DESCRIPTION OF WORK

###### A. General:

1. Furnish all labor, materials, tools, equipment and services for all pipe and pipe fittings as indicated in accordance with provisions of Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure and complete installation.
4. See Chapter 1 for General Requirements.

###### B. Related specification sections include but are not limited:

1. 15062 - Ductile Iron Pipe and Fittings
2. 15067 - Plastic Pipe for Pressure Service
3. 15100 - Valves and Appurtenances

#### 1.02 SUBMITTALS

- A. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.
- B. Verify on shop drawings, dimensions, schedule of pipe, linings, coatings, fittings, hangers, supports, and miscellaneous appurtenances. When special fittings are necessary, verify locations of items and include complete details.
- C. Yard piping drawings. Submit scaled drawings showing locations and dimensions to and from fittings, valves, structures, gates, and related appurtenances. Provide scaled drawings to a minimum scale of 1/8-inch equals 1-foot. Provide details to minimum scale of 1/8-inch equals 1-foot. Information shall include but not necessarily be limited to:
  1. Dimensions of piping lengths
  2. Invert or centerline elevations of piping crossings
  3. Acknowledgment of bury depth requirements
  4. Details of fittings, tapping locations, thrust blocks, restrained joint segments, harnessed joint segments, hydrants, and related appurtenances.
  5. Line slopes and vents



**PART 2 PRODUCTS**

**2.01 GENERAL PIPING SYSTEMS**

- A. Unless otherwise shown on drawings or drawing schedule, piping system materials, fittings, and appurtenances are subject to requirements of specific technical specifications and shall be as follows:

Pipe Size Range in Inches	Piping System
1-3 PVC/PE	AWWA PVC 1120 or PE DR 11
4-12 PVC	AWWA C900 DR 18 PVC PIPE
3-12 DIP	ANSI/AWWA C151/A21.51

**PART 3 EXECUTION**

**3.01 DELIVERY, INSPECTION AND STORAGE**

- A. Inspect materials thoroughly upon arrival. Remove damaged or rejected materials from site.
- B. Observe manufacturer's directions for delivery and storage of materials and accessories.
- C. Store materials on-site in enclosures or under protective coverings above ground to keep them clean and dry.

**3.02 HANDLING OF PIPE**

- A. Protect pipe coating during handling using methods recommended by manufacturer. Use of bare cables, chains, hooks, metal bars, or narrow skids in contact with coated pipe is not permitted.
- B. Prevent damage to pipe during transit. Repair abrasions, scars, and blemishes. If repair of satisfactory quality cannot be achieved, replace damaged material immediately.
- C. Erect piping to accurate lines and grades and support as required on drawings or described in specifications. When temporary supports are used, ensure that sufficient rigidity is provided to prevent shifting or distortion of pipe. Install expansion devices, as necessary, to allow expansion and contraction movements.

**3.03 PIPING - GENERAL**

- A. Minimum bury. Unless otherwise shown on the drawings, provide a minimum of 36-inches earth cover over exterior buried piping systems and appurtenances conveying water, fluids, or solutions.

### 3.04

### PIPING WITHIN BUILDINGS, STRUCTURES AND UNITS

- A. Install piping in vertical and horizontal alignment as shown on drawings. Alignment of piping smaller than 4 inches may not be shown. However, install according to drawing intent and with ample clearance and allowance for:
  - 1. Expansion and contraction
  - 2. Operation and access to equipment, doors, windows, hoists, moving equipment
  - 3. Headroom and walking space for working areas and aisles
  - 4. Install vertical piping plumb and horizontal piping runs parallel with structure walls
  
- C. Locate and size sleeves required for piping system. Arrange for chases, recesses, inserts, or anchors at proper elevation and location.
  
- D. Install service piping to provide every plumbing fixture and equipment requiring potable water with suitable supply and soil or waste and vent connection as required by code. Consult manufacturer's data and large scale details of rooms containing plumbing fixtures before roughing in piping. Plug or cap piping immediately after installation.
  
- E. Use reducing fittings throughout piping systems. Bushings will not be allowed unless specifically approved.
  
- F. Provide drain pans and piping from items of equipment where condensation may occur. Run drain piping to nearest floor drain or rainwater downspout. Condensate drain piping shall generally be 1-inch except where otherwise indicated.
  
- G. Soil, waste, vent and rainwater piping installation:
  - 1. Install horizontal soil or waste lines with fall to produce flow rate of 2-feet per second or 1/8 inch per foot. Hold as close to construction as possible to maintain maximum headroom. Make changes of direction with 1/8 bends, and junctions with wye fittings. Use short wye fittings in vertical pipe only. Install handhold test tee at base of each stack. Install cleanouts at dead ends, at changes of direction, and at 50-foot intervals on horizontal runs. Where cleanouts occur in concealed spaces, provide with extensions to floors above or to wall as required.
  - 2. Run vent stack parallel to each soil or waste stack to receive branch vents from fixtures. Each vent stack shall originate from soil or waste pipe at its base. Where possible, combine soil, waste, or vent stacks before passing through roof so as to minimize roof openings. Offset pipes running close to exterior walls away from such walls before passing through roof to permit proper flashing. Provide pipes passing through roofs with cast iron increases minimum of 12-inches below roof one size larger than pipe but in no case less than 4-inches. Terminate each vent with approved frost proof jacket.
  - 3. Provide each vent pipe passing through roof with 4-lb sheet lead flashing consisting of 18 x 18 inch base with tubular vertical sleeve surrounding pipe with 1-inch minimum spacing and turning in 2 inches at top. Provide gasket seal between top and lead sleeve.
  - 4. Carry vent stacks 4-inches and larger full size through roof. Extend vent stacks at

- least 12 inches above roofing.
5. Provide each roof drain with 4-lb sheet lead flashing 36 x 36-inch square clamped under flashing ring of drain.

H. Potable or service water piping installation:

1. Install drain tees with capped nipples of IPS brass 3-inches long at low points. If low points occur in concealed piping, provide approved flush access panel. These drains are not shown on drawings.
2. Slope water lines down to drain points not less than 1-inch in 60-feet.
3. Wherever threaded piping is installed, provide clean-cut tapered threads with ends thoroughly reamed after cutting to remove burrs. Pipe joint cement permitted only on external threads. For screwed nipples for connections to flush valves, lavatory supplies, and other equipment with threaded connections use iron, copper, or brass pipe.
4. Install ball, butterfly, gate, check, and plug valves where indicated or required to adequately service all parts of system and equipment. Unless otherwise indicated, install valves on each branch serving restroom. Install valve on inlet and outlet connections of heat exchangers and on other equipment connected to water lines.
5. Install union between valves and connections to each piece of equipment and install sufficient number of unions throughout piping system to facilitate installation and servicing. On copper pipe line, install wrought copper solder-joint copper to copper unions for lines 2-inches and smaller; for lines 2-1/2-inches and over, install brass flange unions.
6. Construct and equip plumbing fixtures and equipment with anti-siphon devices as to entirely eliminate any danger of siphoning waste material into potable water supply system.
7. Where exposed pipes 6-inches in size and smaller pass through floors, finished walls, or finished ceilings, fit with nickel or chrome-plated plates large enough to close hole completely around pipes. Secure plates to pipe by set screw in approved manner.
8. Size supply branches to individual fixtures as scheduled or indicated on drawings.
9. Install piping so as to be free to expand with proper loops, anchors, and joints with injury to system or structure.
10. Provide branches to wall hydrants or hose bibs in exterior location with interior shutoff and drain valves.
11. Provide approved type vacuum breaker installations indicated or as required by Code.

**3.05 PIPING OUTSIDE BUILDINGS AND STRUCTURES**

- A. Install piping as shown on drawings with ample clearance and allowance for expansion or contraction.
- B. Install flexible joint within two (2) feet of point where pipe enters or leaves structure. Provide balance of piping with standard laying lengths and in accordance with drawings.

**3.06 PIPE INTERSECTIONS WITH STRUCTURES AND UNITS**

- A. Enter and exit through structure walls by using wall seals specified or as shown on

drawings.

### 3.07 EQUIPMENT PIPE CONNECTIONS

- A. Exercise care in bolting flanged joints so that there is no restraint on the opposite end of pipe or fitting which would prevent uniform gasket pressure at connection or would cause unnecessary stresses to be transmitted to equipment flanges. Where push-on joints are used in conjunction with flanged joints, final positioning of push-on joints shall not be made until flange joints have been tightened without strain.
- B. Tighten flange bolts at uniform rate which will result in uniform gasket compression over entire area of joint. Provide tightening torque in accordance with manufacturer's recommendations.
- C. Support and match flange face to uniform contact over their entire face area prior to installation of any bolt between the piping flange and equipment connecting flange.
- D. Permit piping connecting to equipment to move freely in directions parallel to longitudinal centerline when and while bolts in connection flange are tightened. Align, level, and wedge equipment into place during fitting and alignment of connecting piping. Grout equipment into place prior to final bolting of piping but not before initial fitting and alignment. To provide maximum flexibility and ease of alignment, assemble connecting piping with gaskets in place and minimum of four (4) bolts per joint installed and tightened. Test alignment by loosening flange bolts to see if there is any change in relationship of piping flange with equipment connecting flange. Realign as necessary, install flange bolts, and make equipment connection.
- E. Provide utility connections to equipment shown on drawings, scheduled or specified.
- F. Obtain rough-in data from approved shop drawings on equipment. Obtain rough-in data for relocating existing equipment and coordinate with Owner.
- G. Unless otherwise specified, make piping connections to equipment, including but not limited to installation of brass and fittings, strainers, pressure-reducing valves, flow control valves, and relief valves provided with or as an integral part of equipment.
- H. Furnish and install sinks, brass, fittings, strainers, pressure-reducing valves, flow control valves, pressure relief valves, and shock absorbers which are not specified to be provided with or as an integral part of equipment.
- I. For each potable or service water supply piping connection to equipment, furnish and install union and gate or angle valve. Minimum size to be 1/2-inch.
- J. Furnish and install "P" trap for each waste piping connection to equipment if waste is connected directly to building sewer system. Size trap as required by Plumbing Code.
- K. Stub piping for equipment, sinks, lavatories, supply and drain fittings, key stops, "P" traps, miscellaneous traps, and miscellaneous brass through wall or floor and cap and protect until such time when later installation is performed. Run piping mains and branches in laboratory benches, built-in counters, and cabinet work if acceptable to Construction

Manager.

### **3.08 ANCHORAGE AND BLOCKING**

- A. Block, anchor, or harness exposed piping subjected to internal pressure, in which mechanical, push-on, flexible, or similar joints are installed to prevent separation of joints.
- B. Provide reaction blocking, anchors, joint harnesses, or other acceptable means for preventing movement of piping caused by internal pressure in buried piping tees, wye branches, plugs, or bends.
- C. Place concrete blocking so that it extends from fitting into solid undisturbed earth wall. Concrete blocks shall not cover pipe joints. Provide bearing area of concrete in accordance with drawing detail. In event that adequate support cannot be achieved against undisturbed soil, install restrained piping joints.
- D. Provide reaction blocking, anchorages, or other supports for fittings as shown on drawings for piping installed in fills, unstable ground, above grade, or exposed within structures.

### **3.09 CLEANING**

- A. Clean interior of piping systems thoroughly before installing. Maintain pipe in clean condition during installation.
- B. Before jointing pipe, thoroughly clean and wipe joint contact surfaces and then properly dress and make joint.
- C. Immediately prior to pressure testing, clean and remove grease, metal cuttings, dirt, or other foreign materials which may have entered the system.
- D. At completion of work and prior to final acceptance, thoroughly clean work installed under these specifications. Clean equipment, fixtures, pipe, valves, and fittings of grease, metal cuttings, and sludge which may have accumulated by operation of system, from testing or from other causes. Repair any stoppage or discoloration or other damage to parts of building, its finish, or furnishings, due to failure to properly clean piping system, without cost to Owner.

### **3.10 PIGGING, FLUSHING AND CLEANING**

- A. All mains and distribution lines shall be pigged, cleaned and flushed to remove all sand and other foreign matter. The Contractor shall be responsible for developing a pigging and flushing plan to be submitted to the Engineer for approval prior to pigging and flushing. The contractor shall dispose of all water used for pigging and flushing without causing a nuisance or property damage. Any permits required for the disposal of flushing water shall be the responsibility of the Contractor.
- B. Flushing water used by the Contractor shall be taken from an approved metered source. The water utility will provide the meter and designate the source. Flushing water shall be at the Contractor's expense. Flushing water shall be potable water for potable water mains. RCW mains may be flushed with potable or reclaimed water.

- C. The cleaning of the new piping system shall be accomplished by the controlled and pressurized passage of a series of hydraulic or pneumatic polyurethane plugs of varying dimensions, coatings, and densities; which shall be selected by the pipe cleaning Contractor. The Contractor shall provide a means to enter the pig into the system, control and regulate flow, monitor flows and pressures, and to remove the pig from the system. The contractor shall maintain a constant surveillance of the system and immediately report to the proper authority any inline problems encountered or any malfunctions discovered in the piping system. A record of pig models, sizes, styles, and other pertinent information shall be kept by the Contractor and turned over to the Owner.

### **3.11 TESTING AND INSPECTION**

- A. Upon completion of piping, but prior to application of insulation on exposed piping, test all piping systems. Utilize pressures, media and pressure test duration at specified on piping specification sheets. Isolate equipment which may be damaged by the specified pressure test conditions. Perform pressure test using calibrated pressure gages and calibrated volumetric measuring equipment to determine leakage rates. Select each gage so that the specified test pressure falls within the upper half of the gage's range. Notify the Engineer 24 hours prior to each test.
- B. Unless otherwise specified, completely assemble and test new piping systems prior to connection to existing pipe systems.
- C. Acknowledge satisfactory performance of tests and inspections in writing to Engineer prior to final acceptance.
- D. Provide all necessary equipment and perform all work required in connection with the tests and inspections.
- E. Bear the cost of all testing and inspecting, locating and remedying of leaks and any necessary retesting and re-examination.

### **3.12 DISINFECTING POTABLE WATER PIPELINES**

- A. All record drawing requirements must be submitted to the Owner/Engineer prior to starting the bacteriological testing of the water lines.
- B. Prior to being placed in service, all potable water pipe lines shall be chlorinated in accordance with AWWA651, "Standard Procedure for Disinfecting Water Main". The procedure shall meet Health Department requirements. The location of the chlorination and sampling points shall be determined by the Engineer. Taps for chlorination and sampling shall be uncovered and backfilled by the Contractor as required.
- C. The general procedure for chlorination shall be to flush all dirty or discolored water from the lines, and then introduce chlorine in approved dosages through a tap at one end while water is being withdrawn at the other end of the line. The chlorine solution shall remain in the pipe line for 24 hours. Water for flushing, filling and disinfecting the newlines will be provided by the owner and must be obtained without contaminating existing pipe lines. Water obtained from existing pipe lines for this purpose shall pass through an approved air

gap or backflow prevention device.

- D. Following the chlorination period, all treated water shall be flushed from the lines at their extremities and replaced with water from the distribution system. Bacteriological sampling (taken by the Contractor and provided to an approved laboratory by the Contractor) and analysis of the replacement water shall then be made by an approved laboratory or the Health Department in full accordance with the AWWA Manual C651. The line shall not be placed in service until the requirements of the Florida Department of Environmental Protection (FDEP) and County Public Health Department are met. Results of the bacteriological tests together with certified record drawings must be submitted to the Health Department (FDEP) within 30 days of the tests.
- E. Special disinfecting procedures when approved by the Owner may be used where the method outlined above is not practical.

### **3.13 LOCATION OF BURIED OBSTACLES**

- A. Furnish exact location of buried utilities encountered and any below grade structures. Reference items to definitive reference point locations such as found property corners, entrances to buildings, existing structure lines, fire hydrants, and related fixed structures. Include such information as location, elevation, coverage, supports, and additional pertinent information which will be required by future contractors for replacement servicing, or adjacent construction around any buried facility.
- B. Incorporate information to "Record Drawings".

### **3.14 SPECIAL REQUIREMENTS AND PIPING SPECIALTIES**

- A. Insulating joints: Provide insulating joints where dissimilar metals are joined together and where specifically indicated on drawings. Type of joint shall be as detailed and in accordance with the following requirements:
  - 1. Insulating flanges: Provide each unit to consist of flat-faced rubber gaskets.
  - 2. Insulating unions: Provide "dielectric" union by Epcor or equal.
  - 3. Insulating couplings: When joining larger diameter dissimilar metal pipe, use insulating coupling equal to Rockwell No. 416, Dresser Style 39, or equal. When pipes have different outside diameters, use insulating reducing couplings equal to Rockwell No. 417, Dresser Style 39-62, or equal.
- B. Welding:
  - 1. Have each welding operator affix an assigned symbol to all his welds. Mark each longitudinal joint at the extent of each operator's welding. Mark each circumferential joint, nozzle, or other weld in two places 180° apart.
  - 2. Use only certified welders meeting procedures and performance outlined in Section 9 of the ASME other codes and requirements per local building and utility requirements.
  - 3. Have all welds conform to highest industrial practice in accordance with ANSI B31.3 and ANSIB31.1 or other codes and requirements per local building and utility requirements.

- C. Protective coatings and linings:
1. Where coatings, linings, paint, tests and other items qualified in applications of service are stated, pipe and fittings shall be included in referenced conditions.
  2. Where specified, provide coal-tar epoxy linings and coatings in accordance with AWWA C210 to a minimum thickness of 20 mils in not less than two coats.
  3. Where specified, provide cement mortar lining in accordance with AWWA C205.
  4. Where specified, provide Protecto 401 lining.
  5. Where specified, galvanize surface in accordance with hot-dip method using any grade of zinc acceptable to ASTM B6.
  6. Where specified, field paint pipe in accordance with Section 09900 - Painting and Coatings and Section 09902 - Pipe and Equipment Painting.
  7. Where specified, coat pipe 24-inch in diameter and smaller with extruded polyethylene coating equal to EnCoat.
    - a. Where specified, line pipe with a blend of high-density and low density polyethylene powders complying with ASTM D1248 and uniformly fused and bonded to the pipe to a minimum thickness of 40 mils.
- D. Underground alarming tape. Provide underground warning tape constructed of heavy gage 0.004-inch polyethylene film to identify all buried utilities except 3-inch and smaller irrigation pipe. Provide 6-inch wide tape as follows: Film Legend Film Color Electric line below Red Telephone line below Orange Water line below Blue Sewer line below Green Non potable water below Brown Reclaimed Water Below Purple
- E. Install tape directly above each buried utility at a as shown on the Drawings.

**END OF SECTION**



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## SECTION 15062

### DUCTILE IRON PIPE AND FITTINGS

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. Install within the project site all materials and incidentals including flanged joint, mechanical joint, push-on joint, and restrained joint ductile iron pipe and/or ductile iron restrained, flanged, or mechanical joint fittings for potable water mains, reclaimed water mains, wastewater treatment plant process piping, and gravity sewers, complete, as shown on the project drawings.
- B. The Contractor shall coordinate all deliveries with the related Vendor(s) in a manner not to impede construction.

##### 1.02 SUBMITTALS

- A. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.
- B. Except as otherwise shown on the Drawings, either push- on, mechanical, restrained, or flanged joints shall be used. Prior to commencing work, jointing systems for pipe shall be submitted to the Owner's Representative for approval.
- C. All ductile iron pipe and fittings to be installed under this Contract shall be inspected and tested at the foundry as required by the standard specifications to which the material is manufactured. Furnish in duplicate to the Owner's Representative sworn certificates of such tests and their results.
- D. Shop Drawings including layout drawings shall be submitted to the Owner's Representative for approval and shall include dimensioning, methods and locations of supports and all other pertinent technical specifications for all piping to be furnished. Layout Drawings shall be to scale, and shall clearly indicate the amount of pipe to be restrained from each fitting.
- E. The Contractor shall transmit from the Vendor to the Owner's Representative, the pipe manufacturer's certification of compliance with the applicable sections of the Specifications.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Pipe shall be supplied in lengths not in excess of 21-feet.

- B. Buried Pipe shall conform to ANSI/AWWA C150/A21.50 and ANSI/AWWA C151/A21.51, current editions. Below grade pipe 4 to 12-inches in diameter shall be rubber-ring type push-on joint or mechanical joint, pressure Class 350. Below grade pipe 14 to 20-inches in diameter shall be rubber-ring type push-on joint, Pressure Class 250. Below grade pipe 24-inches in diameter shall be rubber-ring type push-on joint, pressure Class 200. Below grade pipe 30 to 60-inches in diameter shall be rubber-ring type push-on joint, pressure Class 150.
- C. Mechanical joint fittings for 4 to 24-inch diameter ductile iron pipe shall be compact ductile iron cast in accordance with ANSI/AWWA C153/A21.53. The working pressure rating for the fittings shall be 350 psi.
- D. Mechanical joint fittings for 30 to 60-inch diameter ductile iron pipe shall be standard size ductile iron cast in accordance with ANSI/AWWA C110/A21.10. The working pressure rating for the fittings shall be 250 psi.
- E. Gaskets shall be EPDM (Ethylene-Propylene Dine Monomer) such as the "Fastite Gasket" of American Ductile Iron Pipe Co., or approved equal in conformance with ANSI/AWWA C111/A21.11, latest edition.
- F. All mechanical joints and push-on joints for pipe, fittings and valves on the wastewater treatment plant site shall be restrained. Restraints shall be Megalug by EBAA Iron, Romac, or equal. Restraints may also be American Ductile Iron Pipe's Fast Grip Gasket, U.S. Pipe's Field Lok Gasket, or equal.
- G. Below grade pipe shall have a one-mil coal tar enamel coating on the outside. The coal tar enamel shall be in accordance with ANSI/AWWA C151/A21.51.
- H. All buried ductile iron pipe and fittings shall be provided with a 4-mil thick cross laminated high density polyethylene encasement or an 8-mil thick polyethylene encasement per ANSI/AWWA C105/A21.5. Color of encasement shall be in accordance with painting specifications based on the service type of the pipe.
- I. Flanged ductile-iron pipe for above ground piping shall conform to current ANSI/AWWA C115/A21.15 with factory applied screwed long hub flanges except as otherwise specified hereinafter. Flanges shall be faced and drilled after being screwed on the pipe with flanges true to 90 degrees with the pipe axis and shall be flush with end of pipe conforming to ANSI B16.1, 125 pounds standard. Flanged pipe shall be special thickness Class 53.
- J. Flanged fittings shall be ductile as specified herein. Flanges and flanged fittings shall be flat face and shall conform to ANSI/AWWA C110/A21.10 for 350 psi pressure ratings between 4 and 24-inch diameter pipe and for 250 psi pressure ratings for 30 to 60-inch diameter pipe. Full face type 1/8-inch thick SBR rubber ring gaskets shall conform to ANSI/AWWA C111/A21.11.
- K. Bolts and nuts on flanged fittings shall be Grade B, ASTM A-307, cadmium plated and conform to ANSI B16.1 for Class 125.

- L. Pipe and fittings above grade, exposed to view in the finished work to be painted shall not receive the standard tar or asphalt coat on the outside surfaces but shall be shop primed on the outside with one coat of Koppers No. 621 rust inhibitive primer or approved equal. All other pipe and fittings shall be shop coated on the outside with a 1.0 mil thick bituminous coat in accordance with ANSI/AWWA C151/A21.51.
  - 1. Should portions of the pipe inadvertently be given the outside coating of coal tar enamel instead of the rust inhibitive primer as required for exposed piping, the surfaces shall be sealed with a non-bleeding sealer coat such as Inertol Tar Strop, or Mobil Anti-bleeding Aluminum Sealer. Sealing shall be part of the work of this section.
- M. All ductile iron pipe and fittings carrying potable water shall have a standard thickness cement lining and seal coats on their interiors in accordance with ANSI/AWWA C104/A21.4.
- N. All interior linings for potable water piping shall be EPA/NSF approved.
- O. Pipe and fitting manufacturers shall be the American Cast Iron Pipe Company, U.S. Pipe and Foundry Company, McWane, Tyler, or approved equal.

### **PART 3 EXECUTION**

#### **3.01 HANDLING PIPE AND FITTINGS**

- A. Care shall be taken in loading, transporting, and unloading to prevent injury to the pipe or coatings. Pipe or fittings shall not be dropped. All pipe or fittings shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe coatings shall be repaired as directed by the Owner's Representative.
- B. All pipe and fittings shall be subjected to a careful inspection and hammer test just prior to being installed.
- C. If any defective pipe is discovered after it has been laid, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional expense to the Owner.

#### **3.02 UNDERGROUND PIPE INSTALLATION**

- A. Alignment and Grade: The pipelines shall be laid and maintained to lines and grades established by the Drawings and Specifications, with fittings, valves and hydrants at the required locations unless otherwise approved by the Owner's Representative. Valve-operating stems shall be oriented to allow proper operation. Hydrants shall be installed plumb.
- B. Underground Conflicts: Prior to excavation, investigation shall be made to the extent necessary to determine the location of existing underground structures and conflicts. Care shall be exercised to avoid damage to existing structures. When obstructions that are not shown on the drawings are encountered during the progress of the

work and interfere so that an alteration of the Drawings is required, the Owner's Representative will alter the Drawings or order a deviation in line and grade or arrange for removal, relocation, or reconstruction of the obstructions. When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of the Owner's Representative, to provide clearance as required by federal, state, or local regulations or as deemed necessary by the Owner's Representative to prevent future damage or contamination of either structure.

C. Trench Construction:

1. Trench preparation shall proceed in advance of pipe installation for only as far as necessary to allow proper pipe installation. The width of the trench at the top of the pipe shall be ample to permit the pipe to be laid and joined properly and allow the backfill to be placed as specified.
2. Bedding shall be provided and compacted in accordance with the details shown on the Drawings.
3. Holes for the bells shall be provided at each joint but shall not be larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than noted previously, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel, except that slight depression may be provided to allow withdrawal of pipe slings or other lifting-tackle.
4. When excavation of rock is encountered, all rock shall be removed to provide a clearance of at least 6-inches below and on each side of all pipe, valves, and fittings for pipe sizes 24-inches or smaller, and 9-inches for pipe 30- inches and larger. When excavation is completed, a bed of sand, crushed stone or earth that is free from stones, large clods, or frozen earth shall be placed on the bottom of the trench to the previously mentioned depths, leveled, and tamped. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris or subterranean structures, such as masonry walls, piers, or foundations that may be encountered during excavation.
5. This installation procedure shall be followed when gravel formations containing loose boulders greater than 8 inches in diameter are encountered. In all cases, the specified clearances shall be maintained between the bottom of all pipe and appurtenances and any part, projection, or point of rock, boulder, or stones of sufficient size and placement which, in the opinion of the Engineer could cause a fulcrum point.
6. Should the trench pass over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation.
7. When the subgrade is found to be unstable or to include ashes, cinders, refuse, organic material, or other unsuitable material, such material shall be removed, to a minimum of at least 3-inches, or to the depth ordered by the Engineer and replaced under the directions of the Engineer with clean, stable backfill material. The bedding shall be consolidated and leveled in order that the pipe may be installed as specified.
8. When the bottom of the trench or the subgrade is found to consist of material that is unstable to such a degree that, in the judgment of the Engineer it

cannot be removed, a foundation for the pipe and/or appurtenance shall be constructed using piling, timber, concrete, or other materials at the direction of the Engineer.

### 3.03 PIPE INSTALLATION

- A. Proper implements, tools, and facilities shall be provided and used for the safe and convenient performance of the work. All pipe, fittings, valves, and hydrants shall be lowered carefully into the trench by means of a derrick, ropes, or other suitable tools or equipment in such a manner as to prevent damage to pipeline material and protective coatings and linings. Under no circumstances shall pipeline materials be dropped off or dumped into the trench. The trench shall be dewatered prior to installation of the pipe.
- B. All pipe fittings, valves, hydrants, and other appurtenances shall be examined carefully for damage and other defects immediately before installation. Defective materials shall be marked and held for inspection by the Owner's Representative who may prescribe corrective repairs or reject the materials.
- C. All lumps, blisters, and excess coating shall be removed from the socket and plain ends of each pipe, and the outside of the plain end and the inside of the bell shall be wiped clean and dry and be free from dirt, sand, grit, or any foreign material before the pipe is laid.
- D. Foreign material shall be prevented from entering the pipe while it is being placed in the trench. During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe.
- E. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to correct line and grade. The pipe shall be secured in place with approved backfill material.
- F. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means approved by the Owner's Representative. When practical, the plug shall remain in place until the trench is pumped completely dry. Care shall be taken to prevent pipe flotation should the trench fill with water.
- G. Trench width at the top of pipe, bedding conditions, and backfill placement and compaction shall be such that design loadings on the pipe will not be exceeded.
- H. Joint Assembly: Pipe joints shall be assembled in accordance with the Manufacturer's instructions and the requirements of ANSI/AWWA C600.
- I. Pipe Deflection: When it is necessary to deflect pipe from a straight line in either the vertical or horizontal plane, or where long radius curves are permitted, the amount of deflection shall not exceed that shown in AWWA C600, latest edition.
- J. Pipe Cutting: Cutting pipe for the insertion of valves, fittings, or closure pieces shall be done in a neat, workmanlike manner without creating damage to the pipe or lining.

Ductile cast iron may be cut using an abrasive pipe saw, rotary wheel cutter, guillotine pipe saw, milling wheel saw, or oxyacetylene torch. Cut ends and rough edges shall be ground smooth and for push-on joint connections, the cut end shall be beveled.

K. Thrust Restraint:

1. All pipe joints, plugs, caps, tees, and bends shall be suitably restrained by attaching steel tie rods or restrained joints as specified.
2. Thrust-restraint design pressure shall be equal to the test pressure of the line.
3. Restrained mechanical joints utilizing setscrew retainer glands or steel harness and tie rods shall be used in place of concrete. Steel tie rods or other components of dissimilar metal shall be protected against corrosion by hand application of a bituminous coating or by encasement of the entire assembly within an 8-mil thick, loose polyethylene casing in accordance with ANSI/AWWA C105/A21.5.

**3.04 ABOVE GROUND PIPE INSTALLATION**

- A. Install pipe in horizontal or vertical planes, parallel or perpendicular to building surfaces unless otherwise shown. Support pipe and fittings to prevent strain on joints, valves and equipment. Install flanged joints so that contact faces bear uniformly on the gasket. Tighten bolts with relatively uniform stress.

**3.05 TESTING**

- A. Hydrostatic pressure and leakage test shall conform to Section 4 of AWWA C600, with the exception that the Contractor shall furnish all gauges, meters, pressure pumps and other equipment needed to test the line.
- B. The pressure required for the field hydrostatic pressure test shall be 180 psi for potable water lines and reclaimed water lines, and shall be 150 psi for force mains. The Contractor shall provide temporary plugs and blocking necessary to maintain the required test pressure of 180 psi or 150 psi. Corporation cocks at least 3/4-inches in diameter, pipe riser and angle globe valves shall be provided at each pipe dead-end in order to bleed air from the line. Duration of pressure test shall be at least two hours.
- C. The leakage test may be conducted at the same time as the pressure test, and shall be of not less than one hour duration. All leaks evident at the surface shall be repaired and leakage eliminated regardless of total leakage as shown by test. Lines which fail to meet tests shall be repaired and retested as necessary until test requirements are complied with. Defective materials, pipes, valves and accessories shall be removed and replaced. The pipe lines shall be tested in such sections as may be required. The line shall be filled with water and all air removed and the test pressure shall be maintained in the pipe for the entire test period by means of a force pump to be furnished by the Contractor. Accurate means shall be provided for measuring the water required to maintain this pressure. The amount of water required is a measure of the leakage.

- D. The amount of leakage which will be permitted shall be in accordance with AWWA C600 Standards for all pressure tests. No pipe installation shall be accepted if the leakage is greater than that determined by the following formula :

$$L = \frac{SD(P)^{1/2}}{133,200^*}$$

- L = Leakage in gallons per hour  
S = Length of pipe in feet  
D = Nominal diameter in inches  
P = Pressure in psi

\* Note: If 20-foot pipe lengths are used, factor to be 148,000

- E. Ductile iron pipe used for gravity sanitary sewers shall be tested for leakage by conducting infiltration tests, exfiltration tests, or low pressure air tests as specified in Section 02072 - Gravity Sewer Construction.

### **3.06 SURFACE PREPARATION AND PAINTING**

- A. All piping and fittings exposed to view shall have their surfaces prepared and painted with a prime coat as defined in these Specifications. Surface preparation and shop priming is a part of the work of this Section.

**END OF SECTION**



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## SECTION 15067

### PLASTIC PIPE FOR PRESSURE SERVICE

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. This Section includes materials and methods of installation of Plastic Pipe for pressure service as shown on the Drawings and as Specified herein.

##### 1.02 SUBMITTALS

- A. Three certified copies of the tests made by the manufacturer or by a reliable commercial laboratory shall be submitted to the Engineer with each shipment of pipe.
- B. All submittals shall be in accordance with Specification 01340 - Shop Drawings, Project Data and Samples.

##### 1.03 HANDLING AND STORAGE

- A. All pipe, fittings, valves, hydrants and accessories shall be loaded and unloaded by lifting with hoists or by skidding in order to avoid shock or damage. Under no circumstances shall materials be dropped. Pipe handled on skid ways shall not be rolled or skidded against pipe on the ground. Slings, hooks or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior surface or interior of the pipe.
- B. Materials, if stored, shall be kept safe from damage. The interior as well as all sealing surfaces of all pipe, fittings, and other appurtenances shall be kept free from dirt or foreign matter at all times. Valves and hydrants shall be drained and stored in a manner that will protect them from damage or freezing.
- C. Pipe stored outside and exposed to prolonged periods of sunlight shall be covered with canvas or other opaque material. Air circulation shall be provided under covering.
- D. Pipe shall not be stacked higher than the limits recommended by the manufacturer. The bottom tiers shall be kept off the ground on timbers, rails, or concrete. Pipe in tiers shall be alternated: bell, plain end; bell, plain end. Pipe shall not be stored close to heat sources.
- E. Gaskets shall be placed in a cool location out of direct sunlight. Gaskets shall not come in contact with petroleum products. Gaskets shall be used on a first-in, first-out basis. Mechanical-joint bolts shall be handled and stored in a manner that will ensure proper use with respect to types and sizes.

## PART 2 MATERIALS AND EQUIPMENT

### 2.01 PLASTIC PIPE

- A. Pipe for pressure service shall be Class 12454-A or B rigid PVC compound in accordance with the requirements of ASTM D1784. Pipe and appurtenances for use in potable water systems shall bear the seal of approval for potable water use of the National Sanitation Foundation or other accredited testing laboratory. All pipes shall have markings indicating pipe size, manufacturer's name, AWWA and/or ASTM specification number, working pressure, and production code.
- B. PVC pressure rated pipe having a nominal diameter between 1.5" and 3", shall be made of 2000 psi hydrostatic design stress compounds designated PVC 1120 and shall conform to ASTM D2241. PVC pipe shall be furnished in 20-foot lengths unless otherwise noted. PVC pipe shall have a standard dimension ratio of SDR 21 and a water pressure rating of 200 psi. Pipe couplings shall have a dimension ratio of SDR 21 and a water pressure rating of 200 psi. Pipe shall have both ends beveled for use with gasketed couplings or one end beveled and one end with a bell. Couplings and gaskets shall be furnished with each length of pipe. Rubber ring gaskets shall conform to ASTM D3139. Nontoxic gasket lubricant shall be as specified by the manufacturer.
- C. Pressure pipe 4-inches through 12-inches in diameter shall conform to the requirements of AWWA C900 for PVC pipe with cast iron pipe equivalent outside diameters. Pipe shall be pressure class 235 unless otherwise shown. Pipe shall have a minimum wall thickness equivalent to a dimension ratio of DR 18 unless otherwise shown. Pipe may be furnished with plain ends for use with elastomeric-gasket couplings or with one end plain and one end with a gasket bell. Couplings and gaskets shall be furnished with the pipe. Gaskets shall conform to ASTM D3139. Nontoxic gasket lubricant shall be as specified by the pipe manufacturer.
- D. Pressure pipe 14-inches through 36-inches in diameter shall conform to the requirements of AWWA C 905 for PVC pipe with cast iron pipe equivalent outside diameters. Pipe 16-inch through 24-inch shall have a minimum wall thickness equivalent to a dimension ratio of DR 18 unless otherwise shown. Pipe shall be pressure Class 235 unless otherwise shown. Pipe 30-inch through 36-inch shall have a minimum wall thickness equal to a dimension ratio of DR 21 unless otherwise shown. Pipe shall be pressure Class 200 unless otherwise shown. Pipe may be furnished with plain ends for use with elastomeric gasket couplings or with one end plain and one end with a gasket bell. Couplings and gaskets shall be furnished with the pipe. Gaskets shall conform to ASTM 1869. Non-toxic gasket lubricant shall be as specified by the pipe manufacturer.
- E. Polyethylene pipe 4" diameter and larger shall be high-density PE 3408 polyethylene resin per ASTM D 3350, Cell Classification 345464C, Class 160, DR 11, CPChem DriscoPlex 4000, 4300 or 4500 or an approved equal, meeting the requirements of

AWWA C906. All pipe materials used in potable water systems shall comply with NSF Standard 61. Outside diameters of water, claimed water and pressure sewer HDPE pipes shall be ductile iron size (DIPS).

## 2.02 FITTINGS

- A. Fittings for use with PVC pipe 3-inches through 24-inches in diameter shall be compact mechanical joint ductile-iron fittings conforming to the requirements of ANSI/AWWA C153/A21.53. Fittings for use with pipe 30-inches and larger shall be mechanical joint gray iron or ductile-iron conforming to the requirements of ANSI/AWWA C111/A21.11a. Bolts for use with mechanical joints shall conform to the requirements of the joint standard. Fittings shall be suitable for a working pressure of 150 psi.
- B. Exterior Coating. Fittings for buried service shall be coated with a bituminous coating approximately 1 mil thick. The finished coating shall be continuous, smooth, neither brittle when cold nor sticky when exposed to the sun and shall be strongly adherent to the pipe.
- C. Polyethylene Encasement. All buried ductile iron fittings shall be provided with a 4-mil thick cross-laminated high density polyethylene encasement or an 8-mil thick polyethylene encasement per ANSI/AWWA C105/A21.5.
- D. Fittings in exposed locations which are to be painted shall be primed with a universal shop primer suitable for use under the finish paint specified.
- E. Linings. Fittings shall have a cement-mortar lining conforming to the requirements of ANSI A21.4/AWWA C104. Cement mortar linings shall be used for all ductile iron fittings conveying potable water and reclaimed water.

## 2.03 RESTRAINED JOINTS

- A. Restrained Joints. Restrained joints for use with PVC pipe shall consist of retainer glands fabricated of ductile-iron conforming to ASTM A536. The gland shall be such that it can replace the standard mechanical joint gland and can be used with the standardized mechanical joint bell conforming to ANSI/AWWA A21.11/C111 and ANSI/AWWA A21-53/C153. The retainer glands shall have a pressure rating equal to that of the PVC pipe on which it is used.
- B. PVC push-on joints adjacent to restrained fittings shall be restrained using harness restraint devices. This harness restraint shall be split to enable installation of the restraint after the spigot has been installed into the bell. The restraint shall consist of a split ring that fits behind the bell, a split restraint ring that installs on the spigot and a number of tie bars to connect the other two parts. Restraint components shall be of ductile-iron conforming to ASTM A536. The restraint ring shall consist of a plurality of individually activated gripping surfaces to hold the spigot and maximize restraint capability.

- C. Twist off nuts, sized same as the tee-head bolts shall be used to insure proper actuating of restraining devices.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Excavation. Excavate trenches as specified in Section 02200 - Earthwork
- B. All pipe and appurtenances shall be examined at the point of delivery. Material found to be defective due to manufacture or damage in shipment shall be rejected. Tests as specified in the applicable material standard may be performed to ensure conformance with the standard.

### **3.02 TRENCH CONSTRUCTION**

- A. Alignment and Grade. The pipelines shall be laid maintained to the lines and grades established by Drawings and Specifications, with fittings, valves hydrants at the required locations unless otherwise approved by the Engineer. Valve-operating stems shall be oriented to allow proper operation. Hydrants shall be installed plumb.
- B. Underground Conflicts. Prior to excavation, investigation shall be made to the extent necessary to determine the location of existing underground structures and conflicts. Care shall be exercised to avoid damage to existing structures. When obstructions that are not shown on the drawings are encountered during the progress of work and interfere so that an alteration of the plans is required, the Owner's Representative will alter the Drawings or order a deviation in line and grade or arrange for removal, relocation, or reconstruction of the obstructions. When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of the Owner's Representative, to provide clearance as required by the Owner's Representative to prevent future damage or contamination of either structure.
- C. Trench Construction. The trench shall be excavated to the required alignment, depth, and width. Trench preparation shall proceed in advance of pipe installation for only as far as necessary to allow proper pipe installation. The width of the trench at the top of the pipe shall be ample to permit the pipe to be laid and joined properly and allow the backfill to be placed as specified.
- D. PVC pipe shall be installed with pipe bedding and backfill as shown on the drawings.
- E. Holes for the bells shall be provided at each joint but shall not be larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than noted previously, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel, except that a slight depression may be provided to allow withdrawal of pipe slings or other lifting tackle.

- F. When excavation of rock is encountered, all rock shall be removed to provide a clearance of at least 6-inches below and on each side of all pipe, valves and fittings. When excavation is completed, a bed of sand, crushed stone or earth that is free from stones, large clods, or frozen earth, shall be placed on the bottom of the trench to the previously mentioned depths; leveled, and tamped. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris of subterranean structures, such as masonry walls, piers, or foundations that may be encountered during excavation. This installation procedure shall be followed when gravel formations containing loose boulders greater than 8-inches in diameter are encountered. In all cases, the specified clearances shall be maintained between the bottom of all pipe and appurtenances and any part, projection, or point or rock, boulder, or stones of sufficient size and placement which, in the opinion of the Engineer could cause a fulcrum point.
- G. Should the trench pass over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation.
- H. When the subgrade is found to be unstable or to include ashes, cinders, refuse, organic material, or other unsuitable material, such material shall be removed, to a minimum of at least 4-inches, or to the depth ordered by the Engineer and replaced under the directions of the Engineer with clean, stable backfill material. The bedding shall be consolidated and leveled in order that the pipe may be installed as specified.
- I. When the bottom of the trench or the subgrade is found to consist of material that is unstable to such a degree that, in the judgment of the Engineer it cannot be removed, a foundation for the pipe and/or appurtenance shall be constructed using piling, timber, concrete, or other materials at the direction of the Engineer.

### **3.03 DIRECTIONAL BORE**

- A. Refer to FDOT Standards and Specifications Book, Section 555.

### **3.04 PIPE INSTALLATION**

- A. The Contractor shall install all pipe in accordance with the recommendations of the pipe manufacturer and as specified herein.
- B. The Contractor shall take care in handling, storage and installation of pipe and fittings to prevent injury to the pipe or coatings. All pipe and fittings shall be examined before installation and pipe which is deemed to be defective by the Owner/Engineer shall not be installed.
- C. The Contractor shall thoroughly clean and keep thoroughly clean, all pipe and fittings prior to during and after installation.

- D. The Contractor shall lay the pipe to the lines and grades shown on the Contract Drawings with bedding and backfill as shown on the Drawings or called out in the Contract Documents. Blocking under the pipe shall not be permitted except through casing sleeves.
- E. The Contractor shall keep the open ends of all pipe closed with a tightly fitting plug when installation is not in progress or the potential exists for dirt or debris to enter the pipe.
- F. The pipe or accessories shall not be dropped into the trench under any circumstances.
- G. The Contractor shall construct all water mains pursuant to the provisions of "Recommended Standards for Water Works", Part 8, incorporated by reference in Rule 17-555.330(3), F.A.C.
- H. Proper implements, tools, and facilities shall be provided and used for the safe and convenient performance of the work. All pipe, fittings, and valves, and hydrants shall be lowered carefully into the trench by means of suitable tools or equipment in such a manner as to prevent damage to pipeline materials. Under no circumstances shall pipeline materials be dropped or dumped into the trench. The trench shall be dewatered prior to installation of the pipe.
- I. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to correct line and grade. The pipe shall be secured in place with approved backfill material.
- J. Trench width at the top of pipe, bedding conditions, and backfill placement and compaction shall be such that design loadings on the pipe will not be exceeded.
- K. Joint Assembly. Pipe joints shall be assembled in accordance with the manufacturer's instructions.
- L. Pipe Deflection. When it is necessary to deflect pipe from a straight line in either the vertical or horizontal plane, or where long radius curves are permitted, the amount of deflection shall not exceed 75% of the amount recommended by the manufacturer.
- M. Pipe Cutting. Cutting pipe for the insertion of valves, fittings, or closure pieces shall be done in a neat, workmanlike manner without creating damage to the pipe. Ends shall be cut square and perpendicular to the pipe axis.
- N. Burrs shall be removed from spigots and ends shall be smoothly beveled. Field cut ends shall be marked for proper depth of joint assembly.
- O. Locator Tape. Install all plastic pipe with a locator tape of the type specified.

- P. Electronic Marker. Install electronic markers of the type specified for all buried piping at 24-inches below grade.
- Q. Thrust Restraint. All plugs, caps, tees, and bends, unless otherwise specified, shall be provided with reaction backing, or restrained joints as specified.
- R. Thrust-restraint design pressure shall be equal to 1.5 times the design pressure of the line.
- O. Locator Tape. Install all plastic pipes with a locator tape of the type specified.
- P. Electronic Marker. Install electronic markers of the type specified for all buried piping at 24-inches below grade.
- Q. Thrust Restraint. All plugs, caps, tees, and bends, unless otherwise specified, shall be provided with reaction backing, or restrained joints as specified.
- R. Thrust-restraint design pressure shall be equal to 1.5 times the design pressure of the line.

### **3.04 TESTING**

- A. 48-hour notice is needed prior to testing. A letter stating the reasons testing should be scheduled ahead of other jobs must accompany all emergency testing requests.
- B. Owner's Representative and Contractor must be present for all testing, except for testing tapping valves and sleeves.
- C. All pressure pipe lines shall remain undisturbed for 24 hours to develop complete strength at all joints. All pipe lines shall be subjected to a hydrostatic pressure test for two (2) hours at full working pressure, but not less than 180 psi for water/reclaimed (150 psi for force main). Maximum length of pipe to be tested at one time is 2,600 feet. If line is longer than 2,600 feet and cannot be sectioned in 2,600 foot (max.) lengths, the allowable leakage will be figured at 2,600 feet.
- D. Allowable leakage shall be determined by AWWAC600 table for hydrostatic tests. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof; to maintain the test pressure after the air in the pipe line has been expelled and the pipe has been filled with water.
- E. All digging on the job site in the right-of-way must be completed before any testing of water or sewer. Any digging or boring across water or sewer lines after they have been tested may result in a retest of the lines at the Engineer's request.
- F. If any revisions or changes are made after initial testing, lines will be re-tested at the Engineer's request.



- G. Disconnect water supply during test.
- H. All force mains will be tested from the valves in the valve vault at the lift station to the point of connection whether it be against a valve on another force main or into a manhole.
- I. All services to be above ground during test. The services should be the correct length so they will be one (1) foot inside right-of-way line.
- J. All fire hydrant gate valves to be open during test.
- K. All visible leaks are to be repaired, regardless of the amount of leakage.
- L. Check gauge pressure periodically during test. If test pressure drops to 175 psi for water/reclaimed lines or to 145 psi for force mains during test, the line must be repumped back to 180 psi for water/reclaimed (150 psi force mains) and the amount of leakage measured. The test will continue on with the remaining time left. At the end of the test, the line must be repumped again back to 180 psi (150 psi for force main) and the amount of leakage measured and added to any previous leakage determined earlier in the test.
- M. After the line passes the test, the pressure will be blown off from the opposite end of line from the gauge location. Fire hydrants, services and end-of-line blow offs will be opened to demonstrate they were on line during the test.
- N. At end of test, the test gauge must return to zero. The pressure gauge must read 0 psi to a maximum of 300 psi in 5 psi increments.
- O. The section of line being tested must be identified on the charge sheet. The length and size of pipe, the exact area being tested and the valves being tested against, must be identified. Use Station numbers if available.
- P. A copy of the charge sheet will be given to the Owner's Representative and the Contractor at the end of the test.

**END OF SECTION**

## SECTION 15100

### VALVES AND APPURTENANCES

#### **PART 1 GENERAL**

##### **1.01 SCOPE OF WORK**

- A. Furnish all labor, materials, equipment and incidentals required and install complete and ready for operation all valves and appurtenances as shown on the Drawings and as specified herein.
- B. All valves and appurtenances shall be of the size shown on the Drawings and to the extent possible, all equipment of the same type shall be from one manufacturer.
- C. All valves and appurtenances shall have the name of the maker and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.
- D. The equipment shall include, but may not be limited to, the following:
  - 1. Plug Valves
  - 2. Rubber Flapper Swing Check Valves
  - 3. Resilient Wedge Type Gate Valves
  - 4. Restrained Flange Adapter
  - 5. Manual Valve Actuators
  - 6. Small Gate Valves
  - 7. Ball Valves

##### **1.02 DESCRIPTION OF SYSTEMS**

- A. All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of potable water, reclaimed water, chemicals, wastewater, etc., depending on the applications

##### **1.03 QUALIFICATIONS**

- A. All of the types of valves and appurtenances shall be products of well-established reputable firms who are fully experienced and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications as applicable.

##### **1.04 SUBMITTALS**

- A. Submit to the Engineer within 30 days after execution of the contract a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.

- B. Complete shop drawings of all valves and appurtenances shall be submitted to the Engineer for approval in accordance with the requirements of Section 01340 - Shop Drawings, Project Data and Samples.

**1.05 TOOLS**

- A. Special tools, if required for normal operation and maintenance shall be supplied with the equipment.

**PART 2 PRODUCTS**

**2.01 RESILIENT WEDGE TYPE GATE VALVES**

- A. Gate valves 2"-66" shall be resilient wedge type rated for 250 psig cold water working pressure. All ferrous components shall be ductile iron. Valves 3 in- 36 in. shall be in full compliance with ANSI/AWWA C515. The words "DI" or "Ductile Iron" shall be cast on the valve. The wedge shall be ductile iron encapsulated with EPDM rubber and provided with male type guides and polymer guide covers. Bolting shall be Type 304 stainless steel and shall be provided with hexagonal heads with dimensions conforming to ANSI B18.2.1. Metric size, socket head cap screws therefore are not allowed.
- B. Operating nut shall be constructed of ductile iron and shall have four flats at stem connection to assure even input torque to the stem.
- C. All gaskets shall be pressure energized O-rings.
- D. Stem shall be sealed by three O-rings. The top two O-rings shall be replaceable with valve fully open and while subject to full rated working pressure. O-rings set in a cartridge shall not be allowed.
- E. Valve shall have thrust washers located with (1) above and (1) below the thrust collar to assure trouble-free operation of the valve.
- F. All internal and external surfaces of the valve body and bonnet shall have a fusion-bonded epoxy coating, complying with ANSI/AWWA C550, applied electrostatically prior to assembly.
- G. Valves shall be certified to NSF/ANSI Standard 61.
- H. Valves shall be AMERICAN Flow Control's Series 2500 or 2500-1 Resilient Wedge Gate Valve.

## 2.02

### RESTRAINED FLANGE ADAPTER

- A. Restrained flange adapters shall be of the size and pressure rating required for each installation and shall be suitable for use on either PVC, Steel, HDPE (with inserts) or ductile iron pipe.
- B. Restrained flange adapters shall be used in lieu of threaded or welded flanged spool pieces. Flange adapters shall be made of ductile iron conforming to ASTM A536, 65-45-12, and have flange bolt circles that are compatible with ANSI/AWWA C110/A21.10.
- C. Restraint for the flange adapter shall consist of a plurality of individual actuated gripping wedges to maximize restraint capability. Torque limited actuating screws shall be used to insure proper initial set of gripping wedges.
- D. The flange adapters shall be capable of deflection during assembly or permit lengths of pipe to be field cut to allow a minimum 0.6" gap between the end of the pipe and the mating flange without affecting the integrity of the seal. The joints shall be capable of deflecting between 5 degrees for 3-inch pipe and 0.5 degrees for 60-inch pipe.
- E. For PVC pipe, the flange adapter will have a pressure rating equal to the pipe.
- F. For Ductile Iron pipe, the flange adapter shall have a safety factor of 2:1 minimum.
- G. The restrained flange adapter is comprised of two rings. The first is the restraint ring which incorporates wedges around the circumference of the ring to grip the pipe firmly and securely. The wedge style of restraint offers enormous pullout strength when compared to set screw restraints. The resiliency of the wedge style restraint allows the flange adapter to withstand severe moment loads.

The second ring is the gasket ring which separates the seals dedicated to each sealing surface. This ring allows pipe to be cut to lengths in the field at a tolerance of 0.6 inch or more. And the gasket ring also enables the joint to deflect during assembly.

- H. The restrained flange adapter shall be coated with fusion bonded epoxy paint at the factory.
- I. The flange adapter shall be the Series 2100 Megaflange adapter as manufactured by EBAA Iron, Inc or approved equal.
- J. All flange adapters shall have a sufficient number of factory installed anchor studs to meet or exceed the test pressure rating for this project, 180 psi minimum.

## 2.03 MANUAL VALVE ACTUATORS

### A. General

1. All manual valve actuators shall conform to Section 3.8 of the AWWA C504 Standard Specification and shall be manually operated.
2. Actuators shall be capable of seating and unseating the disc against the full design pressure and velocity, as specified for each class, into a dry system downstream, and shall transmit a minimum torque to the valve. Actuators shall be rigidly attached to the valve body.
3. Valve actuators shall be provided, mounted and tested by the valve manufacturer.

### B. Manual Actuators

1. Manual actuators shall have permanently lubricated, totally enclosed gearing with handwheel and gear ratio sized on the basis of actual line pressure and velocities. Actuators shall be equipped with handwheel, position indicator, and mechanical stop-limiting locking devices to prevent over travel of the disc in the open and closed positions. They shall turn counter-clockwise to open valves. Manual actuators shall be of the traveling nut, self-locking type and shall be designed to hold the valve in any intermediate position between fully open and fully closed without creeping or fluttering. Actuators shall be fully enclosed and designed to produce the specified torque with a maximum pull of 80 pounds in the handwheel or chainwheel. Actuator components shall withstand an input of 450 foot pounds for 30" and smaller and 300 foot pounds for larger than 30" size valves at extreme actuator positions without damage. Valves located above grade shall have handwheel and position indicator, and valves located below grade shall be equipped with a two inch (2") square AWWA operating nut located at ground level and a cast iron extension type valve box. Valve actuators shall conform to AWWA C504, latest revision.

## 2.04 SMALL GATE VALVES

- A. Gate valves 2-1/2-in in diameter and smaller in size, shall have flanged or threaded ends as required; and shall be brass conforming to Federal Specification WWV- 54, Type I or II, solid wedge, rising-stem-type gate valves as manufactured by Jenkins Bros. or equal products as manufactured by Crane, Fairbanks. Kennedy Valve Mfg. Co., or equal.

## 2.05 BALL VALVES

- A. Ball Valves sizes 1/2" to 4" shall be TYPE 21 and shall be of true union design with two-way blocking capability. All O-rings shall be EPDM or FKM with PTFE seats. PTFE seats shall have elastomeric backing cushion of the same material as the valve seals. Stem shall have double O-rings and be of blowout-proof design. The valve handle shall double as carrier removal and/or tightening tool. ISO mounting pad shall

be integrally molded to valve body for actuation. The ball valves shall have a pressure rating of 230 psi for sizes 1/2" to 3" and 150 psi for 4" at 70 ° F. Type 21 Ball Valves must carry a two-year guarantee, as manufactured by Asahi/America, Inc.

- B. All ball valves used for chemicals prone to "off-gassing" (e.g. sodium hypochlorite, hydrogen peroxide) shall be vented to avoid entrapment of vapors.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. All valves and appurtenances shall be installed in the location shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the Engineer before they are installed.
- B. After installation, all valves and appurtenances shall be tested at least two hours at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the Engineer.
- C. Install all floor boxes, brackets, extension rods, guides, the various types of operators and appurtenances as shown on the Drawings that are in masonry floors or walls, and install concrete inserts for hangers and supports as soon as forms are erected and before concrete is poured. Before setting these items, the Contractor shall check all plans and figures which have a direct bearing on their location and he shall be responsible for the proper location of these valves and appurtenances during the construction of the structures.
- D. Pipe for use with flexible couplings shall have plain ends as specified in the respective pipe sections in Chapter 15.
- E. Flanged joints shall be made with high strength, low alloy Corten bolts, nuts and washers. Mechanical joints shall be made with mild corrosion resistant alloy steel bolts and nuts. All exposed bolts shall be painted the same color as the pipe. All buried bolts and nuts shall be heavily coated with two (2) coats of bituminous paint comparable to Inertol No. 66 Special Heavy.
- F. Prior to the installation of sleeve-type couplings, the pipe ends shall be cleaned thoroughly for a distance of 8 inches. Soapy water may be used as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6 inches from the end, and the middle ring shall be placed on the substantial completion date unless otherwise requested by the Owner.
- G. Valve boxes with concrete bases shall be installed as shown on the Drawings. Mechanical joints shall be made in the standard manner. Valve stems shall be vertical in all cases. Place a cast iron box over each stem with the base bearing on compacted fill and the top flush with final grade. Boxes shall have sufficient bracing

to maintain alignment during backfilling. Knobs on the cover shall be parallel to pipe. Remove any sand or undesirable fill from valve box.

### **3.02 RESTRAINING CLAMPS AND TIE RODS ON PIPE RUN**

- A. Restraining clamps and tie rods shall be used on all pipe runs, as directed by the Engineer and/or shown on the Drawings. Restraining devices shall be JCM Industries, Inc. - Sur-Grip, EBAA Iron, Inc. - Megalug, Romac, or approved equal. Other types shall be submitted to the Owner's Representative for approval.

### **3.03 SHOP PAINTING**

- A. Ferrous surfaces of valves and appurtenances shall receive a coating of rust-inhibitive primer. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

### **3.04 FIELD PAINTING**

- A. All metal valves and appurtenances specified herein and exposed to view will be painted per Section 09900 with a color appropriate to its usage in accordance with the color code.

### **3.05 INSPECTION AND TESTING**

- A. Completed pipe shall be subjected to a hydrostatic pressure test for two hours at 180 psi pressure. All leaks shall be repaired and lines retested as approved by the Owner's Representative. Prior to testing, the gravity pipelines shall be supported in an approved manner to prevent movement during tests.

**END OF SECTION**