



City of North Port
FINANCE DEPARTMENT/PURCHASING DIVISION
4870 CITY HALL BLVD, STE 337
NORTH PORT, FLORIDA 34287
Office: 941.429.7170
Fax: 941.429.7173
Email: purchasing@cityofnorthport.com



February 15, 2019

ADDENDUM 2

TO: PROSPECTIVE BIDDERS

RE: RFB NO. 2019-50 Hillsborough Station Pump Station Improvements

DUE DATE February 27, 2019

City Hall, Room 302 (Bids need to be delivered to Room 337 so they can be date and time stamped on or before 2:00 PM. Bid opening will commence in Room 302 shortly thereafter)

Bidders are hereby notified that this addendum shall be made part of the above-named bid and contract documents. The following changes to the above bid are issued to modify, and/or clarify the bid and contract documents (the deletions are as **strikethroughs** and additions as **underlined**). These items shall have the same force and effect as the original documents, and bids to be submitted on the specified date shall conform with the additions, deletions and revisions as listed herein.

Q1: Question. On the Bid Schedule- Summary of Pay Items, Item 5 it says install one new 12" BFV and one new 16" BFV. There are currently two 12" BFV's and two 16" BFV's in the system. Does line item 5 need to be changed to include two of each size BFV's?

A1: Delete current bid schedule and use the revised bid schedule provided with this addendum and replace the existing Excel spreadsheet with the revised Excel spreadsheet marked RFB 2019-50 1C Addendum 2 Revised Bid Schedule.

Firms are required to acknowledge receipt of this addendum on their proposal forms. All other terms and conditions of the original proposal and contract documents remain the same.

Keith Raney

Keith Raney, CPPB, CPPO
Contract Administrator II
Finance Department/Purchasing Division
4970 City Hall Blvd.
North Port, Florida 34286
Tel: 941.429.7103
Fax: 941.429.7173

E-mail: kraney@cityofnorthport.com

Receipt of Addendum No. 2 shall be noted within the Bid Form in the appropriate section.

End of Addendum No.2

BID SCHEDULE - SUMMARY OF PAY ITEMS

It is understood that the estimated summary of pay item quantities are approximate only and are solely for the purpose of facilitating the comparison of bids, and that the Contractor's compensation shall be computed upon the basis of the actual quantities in the completed work, whether they be more or less than those shown.

Preparation of Bid Schedules: Contractor MUST use the City provided bid schedule below or the provided excel spreadsheet, if provided with the solicitation. **DO NOT RECREATE THIS FORM.** All blank spaces in the Bid Form must be filled in legibly. *Bidder should not reference the words "No Charge, N/A, included, dash, etc." in any of the blocks. Bidder must identify a monetary amount for each **UNIT COST** and **EXTENDED COST** (unless the unit price is "x" out by the City). **UNIT COST** prevails over **EXTENDED COST**. Failure to identify a monetary amount in any of the **UNIT COST** line items shall cause bidder to be deemed non-responsive and bid response be rejected.* In case of discrepancy between unit price and extended price, the unit price will govern. Apparent errors in extension will be corrected.

BID FORM OPTION A Addendum 2					
NORTH PORT UTILITIES					
HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS					
ITEM	DESCRIPTION	QUANTI TY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$
4A	Install new ductile iron CL53 piping (12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Remove Concrete Pipe Supports, Install new Pipe Supports per Plan. Three (3) Taps and PVC connections	1	LS		\$
5	Install Two (2) new 12" BFV, and Two (2) new 16" BFV	1	LS		\$
	SUB TOTAL ITEMS 3 - 5				\$
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$
					\$
	TOTAL COST ESTIMATE				\$

BID FORM – Option Alternative B Addendum 2					
NORTH PORT UTILITIES					
HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$
4B	Install new stainless steel custom welded piping (SCH20 12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / SCH 10 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Re use pipe supports. Three (3) Taps and PVC connections	1	LS		\$
5	Install two (2) new 12" BFV, and two (2) new 16" BFV	1	LS		\$
	SUB TOTAL ITEMS 3 - 5				\$
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$
					\$
	TOTAL COST ESTIMATE				\$

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

RFB 2019-50 BID FORM OPTION A
 NORTH PORT UTILITIES
 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS	\$0.00	\$ -
4A	Install new ductile iron CL53 piping (12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Remove Concrete Pipe Supports, Install new Pipe Supports per Plan. Three (3) Taps and PVC connections	1	LS	\$0.00	\$ -
5	Install Two (2) new 12" BFV, and Two (2) new 16" BFV	1	LS	\$0.00	\$ -
SUB TOTAL ITEMS 3 - 5					\$ -
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$ -
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$ -
					\$ -
TOTAL COST ESTIMATE					\$ -

Date:

Signed (Person authorized to bind the company):

Name (printed): Title:

RFB 2019-50 BID FORM - OPTION B ALTERNATE
 NORTH PORT UTILITIES
 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$ -
4B	Install new stainless steel custom welded piping (SCH20 12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / SCH 10 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Re use pipe supports. Three (3) Taps and PVC connections	1	LS		\$ -
5	Install Two (2) new 12" BFV, and Two (2) new 16" BFV	1	LS		\$ -
SUB TOTAL ITEMS 3 - 5					\$ -
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$ -
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$ -
					\$ -
TOTAL COST ESTIMATE					\$ -

Date:

Signed (Person authorized to bind the company):
 Name (printed): Title:



City of North Port
FINANCE DEPARTMENT/PURCHASING DIVISION
4870 CITY HALL BLVD, STE 337
NORTH PORT, FLORIDA 34287
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Email: purchasing@cityofnorthport.com



February 8, 2019

ADDENDUM 1

TO: PROSPECTIVE BIDDERS

RE: RFB NO. 2019-50 Hillsborough Pump Station Improvements

DUE DATE February 27, 2019

City Hall, Room 302 (Bids need to be delivered to Room 337 so they can be date and time stamped on or before 2:00 PM. Bid opening will commence in Room 302 shortly thereafter)

Bidders are hereby notified that this addendum shall be made part of the above-named bid and contract documents. The following changes to the above bid are issued to modify, and/or clarify the bid and contract documents (the deletions are as ~~striketroughs~~ and additions as underlined). These items shall have the same force and effect as the original documents, and bids to be submitted on the specified date shall conform with the additions, deletions and revisions as listed herein.

Q1: What is the engineer's estimate?

A1: \$111,650.00

Q2: When is construction tentatively scheduled to start on this project?

A2: Minimum 2 months from Board Approval.

Q3: Who is the awarded civil engineer/designer working on this project?

A3: TKW- See Technical Specifications

Q4: Will there be a site visit?

A4: Yes, a site visit will be given to City's Hillsborough Station Pump Station. No questions will be allowed to be asked during the site visit. Staff have been instructed not to answer questions at the site visit. The City of Hillsborough Station Pump Station is located at 17113 W Hillsborough Blvd, North Port. February 13, 2019 at 1:00 P.M.

Q5: Does the Ductile Iron need to be painted.

A5: Yes.

Q6: Does the Stainless Steel need to be painted?

A6: No, but it does need to be labeled.

Q7: Who is responsible for flushing the system for certification?

A7: The City will flush the piping system after the Contractor has successfully pressure tested the entire system.

Q8: Is the Contractor responsible for pressure testing?

A8: Yes.

Q9: How will the Contractor pressure test? Can the system be isolated?

A9: The system can be isolated. Means and methods for the pressure test are the responsibility of the Contractor.

Q10: Can the system be bypassed?

A10: Yes.

Q11: Is there a limited amount of time the system can be bypassed?

A11: Yes, the contract period is specified in the procurement documents.

Q12: Who will bypass the system the City or the Contractor?

A12: The City will isolate the station from the balance of the Distribution System.

Q13: Is there an overhead crane on site?

Q13: No.

Q14: What is the completion time of the project?

A14: As noted in the procurement documents, 90 days to Substantial Completion and 120 to Final Completion.

Q15: The hardware kits for the ductile iron option, are they stainless steel?

A15: As noted in the Technical Specification, stainless steel.

Q16: Can you use mega lugs on the ductile iron option instead of all flanged fittings?

A16: Mega lugs can be used, however mechanical joint piping will not be accepted. Flange adapters, such as UniFlange or MegaFlange are acceptable.

Firms are required to acknowledge receipt of this addendum on their proposal forms. All other terms and conditions of the original proposal and contract documents remain the same.

Keith Raney

Keith Raney, CPPB, CPPO
Contract Administrator II
Finance Department/Purchasing Division
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North Port, Florida 34286
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Fax: 941.429.7173

E-mail: kraney@cityofnorthport.com

Receipt of Addendum No. 1 shall be noted within the Bid Form in the appropriate section.
End of Addendum No.1

City of North Port



Request for Bid No. 2019-50 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS



City of North Port
FINANCE DEPARTMENT/PURCHASING
DIVISION 4970 CITY HALL BLVD
NORTH PORT, FL 34286
Office: 941.429.7170
Fax: 941.429.7173
Email: purchasing@cityofnorthport.com



NOTICE OF AVAILABILITY OF BID SPECIFICATIONS
REQUEST FOR BID NO. 2019-50

HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

The City of North Port is requesting sealed bids to secure the services of an experienced, professional, licensed, and qualified Contractor capable of providing construction services in accordance with specifications to furnish all labor, materials, equipment and incidentals required to construct the City of North Port Hillsborough Booster Pump Station Improvements Project in its entirety as shown on the construction drawings and specified herein.

NON-MANDATORY PRE-BID MEETING: February 6, 2019, AT 2:00 PM
4970 CITY HALL BOULEVARD, ROOM 302, NORTH PORT, FLORIDA
34286

All potential Bidders are recommended to attend the non-mandatory pre-bid conference. The purpose of the Pre-Bid Meeting is to provide a briefing on the City's expectations and performance requirements for submission of Bid documents.

BID OPENING: February 27, 2019 AT 2:00 PM
4970 CITY HALL BOULEVARD, ROOM 302, NORTH PORT, FLORIDA
34286

****ALL BIDS ARE DATE AND TIME STAMPED IN THE FINANCE DEPARTMENT, SUITE 337 FIRST AND THEN ARE OPENED IN SUITE 302****

Information regarding this project may be viewed and downloaded from Demandstar's website at www.demandstar.com. Links to DemandStar are also available from the city website at www.cityofnorthport.com. Bid specifications are posted on the City FTP site at http://apps.cityofnorthport.com/ftpinfo/dnld_form.aspx (go to the drop down box, select Purchasing and scroll to Project RFB No. 2019-50; however, the only place to obtain addenda are on www.demandstar.com . If you have any questions, concerns, or problems accessing the bid package using the link, please contact Keith Raney, Contract Administrator II at 941.429.7103. Requests for additional information or clarification regarding the specifications must be sent via facsimile to 941.429.7173 or via email to purchasing@cityofnorthport.com. No verbal requests will be honored. All questions and clarifications must be submitted via e-mail or facsimile by **February 20, 2019 at 2:00 PM.**

The City of North Port does not discriminate on the basis of race, color, national origin, sex, age, disability, family or religious status in administration of its programs, activities or services.

PUBLISH DATES: January 25, 2019

- Herald Tribune

PUBLISH DATES: January 25, 2019

- www.cityofnorthport.com & www.demandstar.com

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“THIS IS A ‘SAMPLE CONTRACT’ ISSUED FOR INFORMATIONAL PURPOSES ONLY AND AS SUCH IS SUBJECT TO CHANGE”

SEPARATE INDIVIDUAL ATTACHMENTS:

Go to City FTP site at http://apps.cityofnorthport.com/ftpinfo/dnld_form.aspx (go to the drop-down box, select Purchasing and scroll to Project RFB No. 2019-50)

- 1A. Technical Specifications (139 pages)
- 1B. Construction Plans (6 pages)
- 1C. Bid Schedule (2 pages) (1-Bid OPTION A and 1- Bid OPTION ALTERNATIVE B, in excel format)
- 1D. Approved Material List

STATEMENT OF NON-SUBMITTAL

If you **do not** intend to submit a bid on this service, please return this form (see information below) immediately.

We, the undersigned, have declined to submit a bid on the requested Request for Bid **2019-50 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS**

- Insufficient time to respond to the Request for Bid.
- We do not offer this product/service.
- Our schedule would not permit us to perform.
- Unable to meet bond/insurance requirements.
- Specifications are unclear (explain below).
- OTHER (please specify below).

REMARKS: _____

COMPANY NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE: _____ FAX: _____

E-MAIL ADDRESS: _____

SIGNATURE: _____ DATE: _____

Note: "Statement of No Bid" may be faxed or e-mailed to the Purchasing Division at purchasing@cityofnorthport.com or faxed to 941.429.7173.

SECTION I. INSTRUCTIONS TO BIDDERS

THESE CONDITIONS ARE STANDARD FOR ALL BIDS FOR COMMODITIES/SERVICES ISSUED BY THE CITY OF NORTH PORT. THE CITY OF NORTH PORT MAY DELETE, SUPERSEDE OR MODIFY ANY OF THESE GENERAL CONDITIONS FOR A PARTICULAR CONTRACT BY INDICATING SUCH CHANGE IN SPECIAL CONDITIONS TO BIDDERS OR IN THE BID SHEETS. ANY AND ALL SPECIAL CONDITIONS THAT MAY VARY FROM THE GENERAL CONDITIONS SHALL HAVE PRECEDENCE. BIDDER AGREES THAT THE PROVISIONS INCLUDED WITH THIS REQUEST FOR BID SHALL PREVAIL OVER ANY CONFLICTING PROVISIONS WITHIN ANY STANDARD FORM CONTRACT OF THE BIDDER REGARDLESS OF ANY LANGUAGE IN BIDDER'S CONTRACT TO THE CONTRARY.

DEFINITIONS: Terms used in these Instructions to Bidders are defined and have the meanings assigned to them.

- Addenda: a written change to a solicitation
- Bid: any offer submitted in response to this request for Bid.
- Bidder: One that submits a bid in response to this Request for Bid.
- Bid Documents: Includes the General Terms and Conditions; Special Conditions; Technical Specifications, the Bid Form; Non-Collusive Affidavit; Public Entity Crime Form; Certificate(s) of Insurance, if required; Payment and Performance Bonds, if required; Corporate Resolution; Bid Bond, if required; Local Business Affidavit, Scrutinized Company Affidavit and Certification and all Addendums issued prior to receipt of bids.
- City: Shall refer to City of North Port, a municipal corporation of the State of Florida.
- Contract: The agreement to perform the services set forth in this solicitation. The Contract will be comprised of the Bid documents signed by both parties including any addenda and other attachments specifically incorporated.
- Responsible: Refers to a bidder that has the capacity and capability to perform the work required under a Request for Bid and is otherwise eligible for award.
- Responsive: Refers to a bid that contains no exceptions or deviations from the terms, conditions, and specifications set forth in the Request for Bid.
- Request for Bid (RFB): Shall mean this solicitation document, including any and all addenda. A RFB contains well-defined terms, conditions, and specifications, and is awarded to the lowest priced responsive and responsible bidder.
- Solicitation: The written document requesting either bids or proposals from the marketplace.
- Successful Bidder(s): The lowest responsive, responsible Bidder(s) to whom City (on basis of City's evaluation) makes an award
- Vendor or Contractor: A general reference to any entity responding to this solicitation or performing under any resulting Contract.

The City has established for purposes of this Request for Bid (RFB) that the words "shall," "must," or "will" are equivalent and indicate a mandatory requirement or condition, the material deviation from which shall not be waived by the City. A deviation is material if, in the City's sole discretion, the deficient response does not substantially satisfy this RFB's mandatory requirements. The words "should" or "may" are equivalent in this RFB and indicate very desirable conditions, or requirements that are permissive in nature.

1. INSTRUCTIONS TO BIDDERS

A. QUALIFICATIONS OF BIDDER: It is intent to the City to award this Contract to the lowest responsible bidder, qualified by experience and solvency, with proven reliability and the ability to provide the services or items required under this Contract within a reasonable time frame acceptable to the City. Bidder may be required to supply information in writing at the request and discretion of the City prior to award of bids, in order to verify above requirements.

B. EXAMINATION OF BID DOCUMENTS: Prior to submission of a bid form, bidders shall carefully examine the General Terms and Conditions, Special Conditions, Technical Specifications, and all other related bid documents, including all modifications thereof, incorporated in the bid package, plus fully informing themselves as to all existing conditions and limitations that effect the work to be performed under this contract.

Discrepancies, omissions, or questions about the intent of the documents should be submitted to the Purchasing Division in written form as a request for interpretation no later than five business (5) days prior to bid opening (or shall be verbally addressed at the pre-bid conference, if applicable).

It shall be the responsibility of the bidder, prior to submitting their response, to either visit www.demandstar.com to view the solicitation and download all issued addenda or contact Purchasing to determine if addenda were issued.

Examination of site: Prior to submitting a bid form, each bidder may examine the site and all conditions thereon. All bid forms shall be presumed to include all such existing conditions as may affect any work to be done on this project. Failure to familiarize himself with such conditions will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any work that may be required to complete the work in accordance with the drawings and Specifications.

C. CLARIFICATION AND ADDITIONAL INFORMATION: Discrepancies, omissions, or questions about the intent of the documents will be submitted to the City of North Port Purchasing Manager, or his/her designee in written form as a request for interpretation no later than five (5) business days prior to the bid opening (or may be verbally addressed at the pre-bid meeting, if applicable).

Interpretations made will be in the form of an addendum to the documents, which will be forwarded to all bidders. Receipt by each bidder must be acknowledged on the bid form, indicating the addendum number and date of issue, therein becoming part of the Contract. No oral explanations shall be binding. The City will attempt to notify all prospective bidders of addenda issued to the bid documents; however, it shall be the responsibility of the bidder, prior to submitting their bid, to contact the Purchasing Manager, or his/her designee, to determine if addenda were issued, acknowledging and incorporating it into their bid.

D. MODIFICATION OR WITHDRAWAL OF BIDS: Bid modifications will be accepted from a bidder only if received in writing, properly signed by an officer of the bidder, and received prior to the opening of bids. Bid modifications must be identified as such and will be opened with the bidder's bid form.

Bids may be withdrawn by request of the bidder prior to the time fixed for opening. Error or negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

E. NO BID: A respondent who is on the bid notification list and decides not to submit a response is requested to complete the Statement of Non-Submittal Form and return it to the City.

F. CONFLICTS WITHIN SOLICITATION: Where there appears to be a conflict between the General Terms and Conditions, Special Conditions, the Technical Specifications, the Bid Form, or any addendum issued, the order of precedence shall be: the last addendum issued, the Bid Form, the Technical Specifications, the Special Conditions, and then the General Terms and Conditions. It is incumbent upon the vendor to identify such conflicts to the designated purchasing representative prior to the bid or proposal response date.

G. PROMPT PAYMENT: It is the policy of the City that payment for all purchases by the City shall be made in a timely manner and that interest payments will be made on late payments in accordance with Part VII, Chapter 218, Florida Statutes, known as the Local Government Prompt Payment Act. The bidder may offer cash discounts for prompt payments; however, such discounts will not be considered in determining the lowest price during bid evaluation.

2. PREPARATION AND SUBMISSION OF BID FORM

Bid Form: Bids shall be made on forms supplied by the City, or as otherwise specified. Each bid must state the name of the bidder, the bidder's full business address and state the type of business entity, followed by the original signature and designation of the officer or other person authorized to bind the corporation. Any erasures or other corrections in the bid form must be explained or noted over the signature of the bidder. Bid forms containing any conditions, omissions, unexplained erasures, alterations, or irregularities of any kind may be rejected by the City.

Bid Bond: Each bid must be accompanied by a bidder's bond or Cashier's check with their bid in the amount of NOT LESS THAN 5% of their total amount of the bid. This security shall ensure that the Bidder does not revoke the bid after bid opening or fails to execute any necessary additional documents. Cashier's checks will be returned to all bidders after award of bid.

Bid Documents: Bid documents and forms shall be submitted sealed to the City of North Port, Purchasing, 4970 City Hall Boulevard, Suite 337, North Port, Florida 34286. The envelope/package shall be clearly marked with the Bid Number, Name and Business Address of the bidder. All interested firms are required to submit one (1) original and one (1) copy of their completed bid offer.

Submission of a response constitutes a binding offer and shall be subject to all terms and conditions specified in the solicitation.

For your bid to be acceptable, ***all blank spaces*** must be completely annotated where and when requested. All bids must contain a manual signature of the authorized representative of the bidder in the space provided on the Bid Certification Form.

Responsibility for getting this bid to the City on or before the specified date and time is solely and strictly the responsibility of the bidder. The City will not be responsible for any delay, for any reason whatsoever. Bids must be received and stamped with the date and time on the outside of the envelope and must be in the City Purchasing Office by the date and time specified for opening.

Bids postmarked prior to said date and time but not received shall not be considered and will be returned to bidder unopened.

Bid Guarantee: The bid form shall be signed where indicated constituting an agreement that the bidder will not withdraw his/her bid for a period of ninety (90) days after the opening of the bids.

Source of Supply and Subcontractors: Bidders are to complete the attached Source of Supply and Subcontractors form. This form must be completed and included with the bid form. If bidder does not have a source of supply or subcontractor, insert "to be determined". When source or subcontractor is determined, selection will be subject to City approval.

Bid Opening: All bids received by the date and time so specified shall be opened and **the name of each bidder and total bid price of each bidder** read aloud within the designated room at City Hall, at the bid opening. The opening and reading shall be in the presence of the City Clerk and the Purchasing Manager or their designees. Bidders and the general public are not required to be present but are invited and encouraged to attend.

Late Bids: Bids received after the date and time of bid opening will not be considered and will not be opened. It will be the bidder's responsibility to make arrangements for the return of the bid package at their expense.

- 3. CITY RIGHTS:** The City of North Port reserves the right to accept or reject any and/or all bids in whole or in part, to waive irregularities and technicalities, and to request resubmission with or without cause and/or to accept the bid that, in its judgment, will be in the best interest of the City. Also, the City reserves the right to accept all or any part of the bid and to increase or decrease quantities to meet additional or reduced requirement of the City, this includes the removal of specific bid forms items without affecting the pricing of other bid form line items. In the event the city receives only one response; the bid may be either accepted or rejected by the City depending on available competition and the timely needs of the City.
- 4. AWARD OF BID:** The award shall be let to the lowest responsive, responsible bidder who fulfills all criteria and specifications with consideration to favorable references and local preference and whose evaluation by the City indicates that the award will be in the best interest of the City.
- 5. Errors:** For the purpose of the initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:
- Obviously misplaced decimal points will be corrected.
- In case of discrepancy between unit price and extended price, the unit price will govern. Apparent errors in extension will be corrected.
- Apparent errors in addition of lump sum and extended prices will be corrected.
- For the purpose of bid evaluation, the City will proceed on the assumption that the bidder intends his/her bid be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the tabulation of bids.
- 6. BID TABULATIONS:** Pursuant to Florida Statute §119.071(1)(b), all bid tabulations shall be posted in the City Hall, 4970 City Hall Boulevard, North Port, Florida and on DemandStar's website at www.demandstar.com within thirty (30) days after bid opening or at such time as the agency provides notice of a decision or intended decision, whichever is earlier.
- 7. WARRANTY:** All warranties express and implied, shall be made available to the City for goods and services covered by this solicitation. All goods furnished shall be fully guaranteed by the vendor against factory and workmanship defects. At no expense to the City, the vendor shall correct any and all apparent and latent defects that may occur within the manufacturer's standard warranty period. The special conditions of the solicitation may supersede the manufacturer's standard warranty.
- 8. DESCRIPTIVE INFORMATION:** Unless otherwise specifically provided in the Technical specifications, all equipment, materials and articles incorporated in the work covered by this Contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in the Technical specifications, reference to any equipment, material, article or patented process, by trade name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. If the bidder wishes to make a substitution to the specifications, the bidder shall furnish the City the name of the manufacturer, the model number and other identifying data and information necessary to aid in the City in evaluating the substitution. Such substitution shall be subject to City approval. Substitutions shall be approved only if determined by the City to be equivalent to the specifications. A bid containing substitution is subject to disqualification if the City does not approve the substitution.
- 9. TAXES/FREIGHT:** The bid shall include any freight, handling, delivery, surcharges or other incidental charges. Unless otherwise specified in the solicitation, prices quoted shall be F.O.B. Destination. The City is exempt from the payment of Federal and State taxes, including sales tax. The bid offer shall not include sales tax to be collected from the City. The City's sales tax exemption is not available to vendor for items vendor purchases, regardless of whether these items will be transferred to the City.

In the event the project is declared a sales tax recovery project by the City, the following procedure shall apply:

- (a) The City representative shall make a recommendation to the Division of Procurement Services regarding the materials to be purchased;
- (b) When those materials are purchased by the City, all purchase orders shall be issued directly from Purchasing;
- (c) The City shall take title to those materials directly from the manufacturer/supplier and shall bear the risk of loss or damage to the materials which are delivered directly from the manufacturer/supplier;
- (d) The City shall be invoiced directly for the materials from the manufacturer/supplier and shall pay the invoices directly to the manufacturer/supplier, presenting its sales tax exemption certificate at the time of payment.

The cost of any materials purchased through the sales tax recovery program shall be deducted from the Contract amount and the vendor shall no longer be responsible for providing those materials. A written change order shall be executed.

10. CONTINUATION OF WORK: Any work that commences prior to and will extend beyond the expiration date of the current Contract period shall, unless terminated by mutual written agreement between the City and the vendor, continue until completion without change to the then current prices, terms and conditions.

11. TERMINATION OF CONTRACT:

Funding in Subsequent Fiscal Years: It is expressly understood by the City and the vendor that funding for any successive fiscal years of the Contract is contingent upon appropriation of monies by the City Commissioners. In the event that funds are not available or appropriated, the City reserves the right to terminate the Contract. The City will be responsible for payment of any outstanding invoices and work completed by the vendor prior to such termination.

Termination With or Without Cause: The City shall have the right to unilaterally cancel, terminate or suspend this Contract, in whole or in part, by providing the Contractor thirty (30) days written notice by certified mail.

The City reserves the right to terminate this Contract, in part or in whole, in the event the vendor fails to perform in accordance with the terms and conditions stated herein. The vendor will be notified by letter of the City's intent to terminate. In the event of termination for default, the City may procure the required goods and/or services from any source and use any method deemed in its best interest. All re-procurement cost shall be borne by the vendor.

Termination by Vendor: Vendor shall have the right to terminate services only in the event of the City failing to pay Vendor's properly documented and submitted invoice within ninety (90) calendar days of the approval by the City's Administrative Agent, or if the project is suspended by the City for a period greater than ninety (90) calendar days.

12. PROPRIETARY OR CONFIDENTIAL INFORMATION: Bidders are hereby notified that all information submitted as part of, or in support of bid submittals will be available for public inspection after opening of bids in compliance with Chapter 119 of the Florida Statutes, the Public Record Act. The bidder should not submit any information in response to this solicitation which the bidder considers proprietary or confidential. The submission of any information to the City in connection with this solicitation shall be deemed conclusively to be a waiver of any protection from release of the submitted information unless such information is exempt from disclosure under the Public Records Act, and such information is marked as exempt. Failure to mark a trade secret as exempt waives the exemption.

13. RULES, REGULATIONS AND LICENSES: The vendor shall comply with all federal, state, and local laws and

regulations applicable to provision of the goods and/or services specified in this solicitation.

It shall be the responsibility of the Contractor to assure compliance with OSHA, EPA and/or other local, federal, or State of Florida rules, regulations or other requirements, as each may apply.

When applicable and as required by law, the bidder will provide a material safety data sheet with each delivery of a toxic substance.

The vendor shall maintain books, records, documents, and other evidence directly pertaining to or connected with the services under this Agreement which shall be available and accessible at the vendor's offices for the purpose of inspection, audit, and copying during normal business hours by the CITY, or any of its authorized representatives. Such records shall be retained for a minimum of five (5) years after completion of the services.

14. CODE OF ETHICS: With respect to this bid, if any bidder violates or is a party to a violation of the Florida Statutes, Chapter 112, Part III, Code of Ethics for Public Officers and Employees, such bidder may be disqualified from furnishing the goods or services for which the bid is submitted and shall be further disqualified from submitting any future bids for goods or services for the City.

15. COLLUSION: By offering a submission to this RFB, the bidder certifies that the bidder has not divulged to, discussed or compared his/her bid with other bidders and has not colluded with any other bidder or parties to this bid whatsoever. Also, bidder certifies, and in the case of a joint bid each party thereto certifies as to his/her own organization, that in connection with this bid: any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices and or cost data, with any other bidder or with any competitor; any prices and/or data quoted for this bid have not been knowingly disclosed by the bidder and will not knowingly be closed by the bidder prior to the scheduled opening directly or indirectly to any other bidder or to any competitor; no attempt has been made or will be made by the bidder to induce any other person or firm to person or persons interested in this bid, principal or principals is/are named therein and that no person other than therein mentioned has any interest in this bid or in the Contract to be entered into; and no person or agency has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee excepting bona fide employees of the bidder.

16. PUBLIC ENTITY CRIMES: In accordance with Florida Statutes Sec. 287.133(2)(a), "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a Contract to provide any goods/services to public entity, may not submit a bid on a Contract with a public entity for construction or repair of 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 Sections 287.017, for Category Two, for a period of 36 months from the date of being placed on the convicted vendor list." By submitting a bid, vendor certifies that vendor is not currently prohibited from transacting business with the City due to the above statute. The vendor shall comply with the terms of this statute both before and during the term of this Contract.

17. DRUG FREE WORKPLACE PREFERENCE: The City has adopted a policy in observation of the Drug Free Workplace Act of 1988. Therefore, it is unlawful to manufacture, distribute, dispense, possess, or use any controlled substance in the City workplace.

The City requests that the attached Drug Free Workplace Affidavit accompany the bid response. This form has been adopted by the City in accordance with the Drug Free Workplace Act. The City will not disqualify any bidder who does not sign the affidavit. The Drug Free Workplace Affidavit is primarily used as a tie breaker when two or more separate entities have submitted bids at the same price, terms and conditions, with preference given to the bidder who has signed the affidavit.

18. EQUAL EMPLOYMENT OPPORTUNITY: The City of North Port, Florida, in accordance with the provisions of Title VII of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that it will ensure that in any Contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit replies in response to this advertisement and will not be discriminated against on the ground of race, color or national origin in consideration for an award.

19. NON-DISCRIMINATION: The City of North Port does not discriminate on the basis of race, color, national origin, sex, age, disability, family or religious status in administration of its programs, activities or services. Pursuant to F.S §287.134(2)(a), 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.

20. DECLARATION OF EXEMPTION FROM PUBLIC RECORD: Pursuant to Florida Statute §119.07(1)(b)(2), all bid documents are exempt from public record until such time as the City provides notice of an intended decision or until 30 days after opening the bids, whichever is earlier.

In accordance with Florida Statutes 119.0701, Contractor shall comply with all public records laws, and shall specifically:

- 20.1. Keep and maintain public records required by the City to perform the service.
 - a. The timeframes and classifications for records retention requirements must be in accordance with the General Records Schedule GS1-SL for State and Local Government Agencies. (See <http://dos.dos.state.fl.us/library-archives/records-management/general-records-schedules/>).
 - b. "Public records" means and includes those items specified in Florida Statutes 119.011(12), as amended from time to time, and currently defined as: All documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material, regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business with the City. Contractor's records under this Contract include but are not limited to, supplier/subcontractor invoices and contracts, project documents, meeting notes, e-mails and all other documentation generated during this Contract.
- 20.2. Upon request from the City's custodian of public records, provide the City, at no cost, with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided for by law. All records kept electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.
- 20.3. Ensure that project records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and, if the Contractor does not transfer the records to City following completion of the contract, for the time period specified in General Records Schedule GS1-SL for State and Local Government

Agencies.

20.4. Upon completion of the contract, transfer, at no cost, to the City all public records in Contractor's possession or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall 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 the completion of the contract, the Contractor shall meet all applicable requirements for retaining public records.

20.5. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CUSTODIAN OF PUBLIC RECORDS, 4970 CITY HALL BOULEVARD, NORTH PORT, FLORIDA 34286, 941.429.7063 OR HOTLINE 941.429.7270; E-MAIL: keto@cityofnorthport.com.**

20.6. Failure of the Contractor to comply with these requirements shall be a material breach of this Contract. Further, Contractor may be subject to penalties under Florida Statutes 119.10.

21. FORCE MAJEURE: The parties will exercise every reasonable effort to meet their respective obligations hereunder, but shall not be liable for delays resulting from force majeure or other causes beyond their reasonable control, including, but not limited to, compliance with any Government law or regulation, acts of nature, acts or omissions of the other party, Government acts or omissions, fires, strikes, national disasters, wars, riots, transportation problems and/or any other cause whatsoever beyond the reasonable control of the parties. Any such cause will extend the performance of the delayed obligation to the extent of the delay so incurred.

22. GOVERNING LAWS: The interpretation, effect, and validity of any Contract resulting from this RFB shall be governed by the laws and regulations of the State of Florida. Exclusive venue of any court action shall be in Sarasota County, Florida.

23. SUBCONTRACTING: Unless otherwise specified in this solicitation, the vendor shall not subcontract any portion of the work without the prior written consent of the City. The ability to subcontract may be further limited by the Special Conditions. Subcontracting without the prior consent of the City may result in termination of the Contract for default.

24. MODIFICATION OF CONTRACT: Any Contract resulting from this solicitation may be modified by mutual consent of duly authorized parties, in writing through the issuance of a modification to the Contract and/or change order as appropriate. This presumes the modification itself is in compliance with all applicable City procedures.

25. SUCCESSORS AND ASSIGNS: The vendor shall not assign any interest in any Contract resulting from this solicitation and shall not transfer any interest in same (whether by assignment or novation) without prior written consent of the City, except that claims for the money due or to become due to the vendor from the City under any Contract may be assigned to a financial institution or to a trustee in bankruptcy without such approval from the City. Notice of such transfer or assignment due to bankruptcy shall be promptly given to the City.

26. CONTRACTING WITH CITY EMPLOYEES OR BOARD MEMBERS: Any City employee, Board member or member of his or her immediate family seeking to Contract with the City shall seek a conflict of interest opinion from the

purchasing manager or their designated representative prior to submittal of a response or application of any type to Contract with the City. The affected employee or Board member shall disclose his or her assigned function within the City and interest or the interest of his or her immediate family in the proposed Contract and the nature of the intended Contract.

Florida Statute §112.313(12) Standards Of Conduct For Public Officers, Employees Of Agencies, And Local Government Attorneys controls contracting with City employees or board members, and provides as follows:

(12) EXEMPTION. --The requirements of subsections (3) and (7) as they pertain to persons serving on advisory boards may be waived in a particular instance by the body which appointed the person to the advisory board, upon a full disclosure of the transaction or relationship to the appointing body prior to the waiver and an affirmative vote in favor of waiver by two-thirds vote of that body. In instances in which appointment to the advisory board is made by an individual, waiver may be effected, after public hearing, by a determination by the appointing person and full disclosure of the transaction or relationship by the appointee to the appointing person. In addition, no person shall be held in violation of subsection (3) or subsection (7) if:

(b) The business is awarded under a system of sealed, competitive bidding to the lowest or best bidder and:

1. The official or the official's spouse or child has in no way participated in the determination of the bid specifications or the determination of the lowest or best bidder;

2. The official or the official's spouse or child has in no way used or attempted to use the official's influence to persuade the agency or any personnel thereof to enter such a contract other than by the mere submission of the bid; and

3. The official, prior to or at the time of the submission of the bid, has filed a statement with the Commission on Ethics, if the official is a state officer or employee, or with the supervisor of elections of the county in which the agency has its principal office, if the official is an officer or employee of a political subdivision, disclosing the official's interest, or the interest of the official's spouse or child, and the nature of the intended business.

27. TRUTH-IN-NEGOTIATIONS CERTIFICATE: If applicable, execution and signature by the vendor of the Bid Form shall act as the execution of a truth-in-negotiation certificate certifying that the wage rates and costs used to determine the compensation provided for in this Contract are accurate, complete, and current as of the date of the Contract.

For professional service Contracts, the original Contract price and any additions thereto will be adjusted to exclude any significant sums by which the City determines the Contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. The City shall exercise its rights under this "Certificate" within one (1) year following payment.

28. GRANT FUNDING: In the event any part of the Contract is to be funded by federal, state, or other local agency monies, the vendor hereby agrees to comply with all requirements of the funding entity applicable to the use of the monies, including full application of requirements involving the use of minority firms, women's business enterprises, and labor surplus area firms. Vendors are advised that payments under the Contract may be withheld pending completion and submission of all required forms and documents required of the vendor pursuant to the grant funding requirements. A copy of the requirements shall be supplied to the vendor by the City upon request.

29. PERFORMANCE/PAYMENT BOND: The successful bidder shall provide the required performance and payment bond or other acceptable security to the City within **ten (10) business days of being awarded the bid. Failure by the successful bidder to provide the bond within ten (10) business days shall be considered a default under Sec. 2-404**

of the City of North Port Administrative Code. Such default shall only be curable at the option of the City. In addition, the Contractor shall be responsible and bear all costs associated to record Performance and Payment Bond with Sarasota County Clerk's Office. Receipt of said recording and certified copy of the bond shall be furnished to the Purchasing Department at the time of the pre-construction meeting. Such default shall only be curable at the option of the City.

In addition, the Contractor shall be responsible and bear all costs associated to record Performance and Payment Bond with Sarasota County Clerk's Office. Receipt of said recording and certified copy of the bond shall be furnished to the Purchasing Department at the time of the pre-construction meeting. Such default shall only be curable at the option of the City.

Upon such default, the City may immediately award the bid to the next lowest responsive and responsible bidder and recover from the original successful bidder the difference in cost between the original winning bid and the next lowest responsive and responsible bidder.

PERFORMANCE/PAYMENT BOND REQUIREMENTS:

The Contractor shall provide a Performance Bond and a Payment Bond, in the form prescribed in Section 3, Contract Documents, each in the amount of 100% of the Contract amount, the costs of which are to be paid by the Contractor. The bonds will be acceptable to the City only if the following minimum conditions are met:

- a. is licensed to do business in the State of Florida;
- b. holds a certificate of authority authorizing it to write surety bonds in this state;
- c. has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is issued;
- d. is otherwise in compliance with the provisions of the Florida Insurance Code; and holds a currently valid certificate of authority issued by the United States Department of Treasury under 31 U.S.C. §§ 9304-9308.
- e. The Surety Company must have a current rating of at least Excellent (A or A-) as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc., of 75 Fulton Street, New York, New York 10038, with an underwriting limitation **of at least two times the dollar amount of the contract.**

If the Surety Company for any Bond furnished by the Contractor files for bankruptcy, has a receiver appointed, is declared bankrupt, becomes insolvent, has an assignment made for the benefit of creditors, has its right to do business terminated in the State of Florida, or ceases to meet the requirements imposed by the Contract Documents, the Contractor shall, within five (5) calendar days thereafter, substitute another Bond and Surety Company, both of which shall be subject to the City's approval.

By execution of these bonds, the Surety Company acknowledges that it has read the surety qualifications and surety obligations imposed by the Contract documents and hereby satisfies those conditions.

30. STATE REGISTRATION REQUIREMENTS: Any bidder required by Florida law to register to do business in this state shall either be registered or have applied for registration with the Florida Department of State in accordance with the provisions of Chapter 607, 608, 617, or 621, Florida Statutes, unless they are exempt. A copy of the registration/application may be required prior to award of a contract. Any partnership submitting a bid in response to this RFB shall have complied with the applicable provisions of Chapter 620, Florida Statutes.

31. NOTICE TO PROCEED/DELIVERY: After award of bid, a Notice to Proceed shall be issued bearing the terms of

delivery. Upon receipt of Notice to Proceed, successful bidder shall acknowledge receipt of same by either fax or mail and shall commence prosecution of the order so that the agreed upon delivery date will be satisfied.

32. PERFORMANCE EVALUATION: At the end of the Contract, the receiving department may evaluate the successful bidder's performance. This evaluation will become public record.

33. PURCHASING AGREEMENTS WITH OTHER GOVERNMENTAL AGENCIES: All bidders submitting a response to this RFB agree that such response also constitutes a bid in accordance with the terms of the RFB to all political subdivisions of Sarasota County and the State of Florida, under the same conditions, for the same prices as this bid, unless otherwise stipulated by the bidder.

34. NONEXCLUSIVE CONTRACT: Award of this Contract shall not require the City to use the Vendor for all work of this type, which may develop during the Contract term. This Contract is non-exclusive. The city reserves the right to concurrently Contract with other entities for similar work if it deems such action to be in the best interests of the City.

35. AUDIT: City shall have the right to audit vendor's records that relate to this Contract. Records shall be maintained for a period of three (3) years from the date of final payment.

36. UNAUTHORIZED ALIEN WORKERS: The City will not intentionally award publicly-funded contracts to any Contractor who knowingly employs unauthorized alien workers, constituting a violation of the employment provisions contained in U.S.C. Section 1324a(e) [Section 274A(e) of the Immigration and Nationality Act ("INA")]. The City shall consider employment by any Contractor of unauthorized aliens a violation of Section 274A(e) of the INA. Such violation by the Contractor of the employment provisions contained in Section 274A(e) of the INA shall be grounds for termination of this Agreement by the City.

37. E- VERIFY: The Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

It is the awarded Bidder's responsibility to ensure that all its employees and subcontractors comply with the employment regulations required by the US Department of Homeland Security. The City shall have no responsibility to check or verify the legal immigration status of any employee of the awarded Bidder.

38. EMPLOYEE BACKGROUND CHECK: If an owner, except a stockholder in a publicly traded corporation, or an employee of the Contractor has been convicted of any offenses requiring registration as a sexual offender or sexual predator, regardless of the location of conviction, the Contractor shall ensure that the offender's or predator's work on the project is consistent with the terms of his probation and registry requirements.

39. PAYMENT: Two (2) original requests for payment must be submitted to the City of North Port on a form approved by the City. In lieu of the hard copies of the pay request submittal, scanned signed digital files of the requests for payments may be submitted as an attachment to an e-mail. Each pay request must be accompanied by written consent of the surety, when applicable, and an updated work schedule to reflect progress of work. Payment shall be subject to the approval and direction of the surety in accordance with F.S. §255.05(11). Price shall be net and all invoices payable according to the Florida Local Government Prompt Payment Act (F.S. ch. 218). Upon certification and approval by the City or its duly authorized agent, progress payments may be made to the Contractor upon his/her application for all services or work completed or materials furnished in accordance with the Contract. Prior to fifty percent (50%) completion, the Contractor will be paid monthly the total value of the work completed and accepted during the

preceding month, less ten percent (10%) retainage. After fifty percent (50%) completion of the construction services purchased pursuant to the Contract, the City must reduce to five percent (5%) the amount of retainage withheld from each subsequent progress payment made to the Contractor upon request of the Contractor. For purposes of this subsection, the term "fifty percent (50%) completion" is the point at which the City has expended fifty percent (50%) of the total cost of the construction services purchased as identified in the Contract together with all costs associated with existing change orders and other additions or modifications to the construction services provided for in the Contract. The City shall inform the Contractor's Surety of any reduction in retainage. The Contractor must update each new pay request in accordance with any changes made to the previous submittal. The City or its duly authorized administrative agent, shall approve final payment for all work, materials and services furnished under this Contract.

Retainage may be reduced upon issuance of the Certificate of Substantial Completion by the City if, in the sole opinion of the City, sufficient progress on the schedule has been accomplished, the surety does not object, and the City has retained adequate coverage for the project through the achievement of Final Completion.

40. MBE: Contractors awarded construction contracts who intend to subcontract material or service requirements of the project are encouraged to subcontract to certified minority business/women business enterprises firms or show good faith effort.

41. DBE Contract Assurance (IF APPLICABLE): The contractor, sub-recipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

42. SWORN STATEMENT, COMPLIANCE WITH FLORIDA TRENCH ACT: Bidder shall be solely responsible for complying with the Florida Trench Safety Act (553.60-553.64 Florida Statutes) and Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 (subpart P) as amended. All costs associated with complying with these requirements shall be included in the separate line items of the bid and shall be as detailed in the Sworn Statement of Compliance with the Florida Trench Safety Act. Bidder shall submit the Statement of Compliance with the Florida Trench Safety Act form provided herein with his bid or with each work assignment.

43. INSURANCE REQUIREMENTS: The successful Bidder shall be required to supply, at their cost, insurance coverage in form and amount as required by the City, as outlined in the bid specifications.

44. CONTACT PROHIBITION: All prospective Bidders are hereby instructed **NOT** to contact any member of the City of North Port Commission, the City Manager, or City of North Port staff member other than the Authorized Contact Persons identified in this Solicitation regarding this solicitation package, Bidder's submittal package, City's Intent to Award, or City's Intent to Reject (if applicable) at any time prior to the FORMAL AWARD for this project. Any such contact shall be cause for rejection of your submittal.

45. SCRUTINIZED COMPANIES:

A. As required by section 287.135(5), Florida Statutes, for contracts of \$1,000,000.00 or less, when submitting a bid or proposal, and prior to entering into a contract with the City, every person or entity shall certify on a form provided by the City, that it is not on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, and that it is not engaged in a boycott of Israel.

B. As required by section 287.135(5), Florida Statutes, for contracts of \$1,000,000.00 or more, when submitting a bid or proposal, and prior to entering into a contract with the City, every person or entity shall certify on a

form provided by the City, that all of the following are true:

1. It is not on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, and that it is not engaged in a boycott of Israel; and
2. It is not on the Scrutinized Companies with Activities in Sudan list or the Scrutinized Companies with Activities in Iran Petroleum Energy Sector list, created pursuant to section 215.473, Florida Statutes; and
3. It is not engaged in business operations in Cuba or Syria.

C. PENALTY:

1. If a false certification is submitted or the person or entity has been placed on one of the above-noted Lists of Scrutinized Companies or has engaged in business operations in Cuba or Syria, the person or entity will be in breach of the Contract terms and the City may terminate the Contract.
2. A person or entity that has been found to have provided a false certification may be subject to a civil penalty equal to the greater of \$2 million or twice the amount of the Contract, plus all reasonable attorney's fees and costs, including any costs for investigations that led to the finding of the false certification; and
3. A person or entity that has been found to have provided a false certification shall be ineligible to bid on any contract with the City for three (3) years after the date the City determined that a false certification has been submitted.

46. LOCAL PREFERENCE: Bidder may claim Local Preference if Bidder qualifies under the definition below and in accordance with Ordinance 2009-10, as may be amended by the City of North Port.

A. Local Business Definition:

Preference shall be given to a "local business or North Port local business" in the purchase of commodities and services procured pursuant to this Section. Bidders desiring to receive preference as a local business will be required to affirmatively state and provide documentation as set forth in the solicitation in support of their status as a local business. Any bidder who fails to submit sufficient documentation with their bid shall not be granted local preference consideration for the purpose of that specific contract award.

"Local business" means a bidder that maintains a physical business address located within the limits of Sarasota County, Charlotte County or Desoto County for a period of six (6) months or more before the bid submission date from which the bidder operates or performs business and where at least fifty percent (50%) of the bidder's employees are residents of the City. Post office boxes may not be used to establish a physical business address.

"North Port local business" means a local business that has its primary physical business address located within the limits of the City for a period of six (6) months or more before bid submission date, from which the bidder operates or performs business and where at least fifty percent (50%) of the bidder's employees are residents of the City. Post office boxes may not be used to establish a physical business address.

If requested by the City, the bidder will be required to provide documentation substantiating the information given in this affidavit. City reserves the right to request supporting documentation as evidence to substantiate the

information given in this affidavit. Failure to do so will result in the bidder's submission being deemed non-responsive.

Any bidder that misrepresents its status as a local business or North Port local business shall be barred from receiving any City contracts for a period of three (3) years.

B. Local Price Match Option:

Each formal competitive bid solicitation shall clearly identify the criteria for award. When a responsive and responsible bidder who is not a local business (hereafter, non-local business bidder) submits the lowest bid price (hereafter, low bid), all responsive and responsible local business and North Port local business bidders shall have five (5) business days to submit an offer to match the low bid, provided the original bid submitted by the local business bidder is within ten percent (10%) of the low bid if the amount of the low bid is no more than one million dollars (\$1,000,000). If the amount of the low bid is more than one million dollars (\$1,000,000) but no more than 2 million dollars (\$2,000,000), local business and North Port local business bidders within five percent (5%) shall have the opportunity to match the low bid. If the amount of the low bid is more than two million dollars (\$2,000,000) but no more than 3 million dollars (\$3,000,000), local business and North Port local business bidders within three percent (3%) shall have the opportunity to match the low bid. If the amount of the low bid is more than three million dollars (\$3,000,000), local business and North Port local business bidders within two and one-half percent (2.5%) shall have the opportunity to match the low bid. The original lowest responsive and responsible North Port local business bidder who matches the low bid shall receive the award. If no eligible North Port local business bidder can match the low bid, the award shall be made to the original lowest responsive and responsible local business bidder who matches the low bid. If no eligible local business bidder can match the low bid, the award shall be made to the lowest responsive and responsible bidder, regardless of local business status.

If there is a tie between a local business and a non-local business, the local business shall receive the award. If there is a tie between two North Port local businesses or two local businesses, the business with the higher percentage of employees who reside within the City shall receive the award.

47. CONFLICTS OF INTEREST – CITY OFFICERS, EMPLOYEES OR BOARD MEMBERS: The Florida Code of Ethics regulates the ability of the City to contract with its public officers (including board members), employees, and their immediate relatives. Respondents shall disclose any such potential conflicts on the provided Conflict of Interest Form. Respondents are responsible for reviewing Florida Statute §112.313 to determine whether they may have a conflict. If Respondent is in doubt as to their ability to contract with the City, they shall seek a conflict of interest opinion from the City Manager or his/her designated representative prior to submittal of a response.

END OF SECTION I

SECTION II. GENERAL PROVISIONS

1. SCOPE OF WORK

1.1 Intent of Contract: Bid forms shall set forth firm bid unit prices for furnishing all necessary materials and completing all work, including but not limited to labor, transportation, supervision, electricity, water, equipment, startup, testing, training and all other work needed for a complete and operational system, as described in the Technical Specifications and/or shown on the Contract Drawings attached herewith. The City reserves the right to establish the exact limits of work in the field and to add or delete from the Project, as it deems necessary. This includes the removal of specific bid form items without affecting the pricing of other bid form line items.

The intent of the Technical Specifications and Contract Drawings, as applicable, is to describe a complete project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between the City and the Contractor. They may be altered only by addendum or change order approved by the City.

1.2 Definitions:

1.2.1 The successful bidder for this Contract will be referred to as the **CONTRACTOR**; Department Director or his/her representative, acting personally or through an assistant duly authorized for such act by the City will be referred to as City. For the purposes of this Contract, the word "Project" shall mean the services limits of **CONTRACTOR**.

1.2.2 The Contract documents consist of the Request for Bids, Instructions to Bidders, Bid Forms, Technical Specifications, Construction Drawings, General Provisions, Special Provisions, Insurance Requirements, and all other related documents, including all modifications thereof incorporated in the documents before their execution. These form the Contract.

1.2.3 Written notice shall be deemed to have been duly served three days after date of postmark, and upon receipt, if delivered to the individual or member of the firm or an officer of the corporation for whom it is intended.

1.2.4 Subcontractor(s), as employed herein, includes only those having a direct Contract with the Contractor and it includes one who furnishes material worked to a special design according to the plans and specifications of this work, but does not include one who merely furnishes material not so worked.

1.2.5 The term "work" of the Contractor includes labor or materials or both, equipment, transportation, or other facilities necessary to complete the Contract.

1.2.6 All time limits stated in the Contract documents are of essence to the Contract.

1.2.7 The words "furnish," "furnish and install," "install," and "provide" or words with similar meaning shall be interpreted, unless otherwise specifically stated, to mean "furnish and install complete in place and ready for service."

1.3 Time of Completion: The Contractor shall complete the work within the time set forth in the Contract. The Contractor shall complete each portion of the work within such time as set forth in the Contract for such portion. The time of completion of the Contract shall be expressed in calendar days.

All work for this project shall be performed during regular business hours. A regular workday shall be considered to

be a maximum of ten (10) hours duration. The cost for inspection time for work performed on weekends, holidays, or in excess of ten (10) hours may be billed to the Contractor at the prevailing wage plus overhead costs for those persons involved.

A working day is any day within the period between the start of the Contract time and the date provided in the Contract for completion or upon field acceptance by the City of all work provided for in the Contract, or as stipulated in the Technical Specifications, or whichever comes first, other than: Saturday, Sunday, any day designated as a holiday by the City, any day the Contractor is prevented from working during the first five (5) hours of the work day, with at least sixty percent (60%) of the normal work force, due to inclement weather.

Request for planned overtime by the Contractor must be submitted in writing to the City, forty-eight (48) hours in advance, and may not proceed without the City's approval.

1.4. Quality of Work: The Contractor agrees to do the work covered under this Contract to the best of his/her ability and conforming to this Contract and specifications and of a quality acceptable to the trades. The Contractor further agrees to follow proper and appropriate instructions by the City.

2. PROSECUTION AND PROGRESS

2.1 Subletting or Assigning of Contracts: The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or his right, title, or interest therein, without written consent of the City.

2.2 Preconstruction Meeting: After the Contract has been awarded, the City will schedule a preconstruction meeting to be held before any work is begun to review the construction aspects of the Project. The meeting will be between the City, the Contractor and various utility companies that will be affected by the construction.

2.3 Performance and Payment Bond: The awarded Contractor shall furnish a certified recorded copy from Sarasota County Clerk's Office of the Performance and Payment Bond in the amount of 100% of the total project price within ten (10) calendar days after notification of award to the Purchasing Department. The undersigned shall be responsible and bear all costs associated to record Performance and Payment Bond with Sarasota County Clerk's Office. Receipt of said recording and a certified copy of the Bond shall be furnished to the Purchasing Department at the time of the pre-construction meeting.

2.4 Submission of Work Schedule/Order of Completion: At the preconstruction meeting, the successful bidder shall have on hand a working schedule for the Project, showing in detail the order in which the Contractor proposes to perform the work. He/she shall indicate the dates on which major equipment will be delivered and various major items of work will start and the estimated completion dates of the major items. Construction Schedule provides additional information for ongoing scheduling requirements associated with this Contract.

2.5 Submission of Schedule of Values: A Schedule of Values to reflect value of equipment, materials and work performed per unit price, with totals shall be submitted at preconstruction meeting. Both parties are to agree on proposed schedule of values prior to any work being performed.

2.6 Provisions for Convenience of Public: The Contractor shall schedule his/her operations so as minimize any inconvenience to adjacent businesses for residences. Where necessary, the City may require the Contractor to construct first the work in any areas along the Project where restrictions caused by construction operations would represent a more serious handicap, before beginning construction in the less affected areas.

3. CONTROL OF THE WORK AND MATERIALS

3.1 **Control of Work:**

3.1.1 Plans and Contract Documents: If required for the project, the Contractor will be furnished a universal serial bus flash drive and four (4) signed and sealed building permit 11"x17" copies of the Plans, Technical Specifications, General and Special Provisions. Additional signed & sealed copies, if needed to obtain permits for the Work associated with this Contract, will be submitted upon written request. Other copies that may be needed by the Contractor shall be produced by the Contractor at his own expense; or, the Contractor may request additional full-size hardcopy of the plans for a cost of \$50.00 for each set of plans. Check shall be written out to North Port Utilities (NPU) and brought to Utilities' Field Office in exchange for plans.

3.1.2 Detail Drawings and Instructions: The City may furnish, with reasonable promptness, additional instructions by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the Contract documents, true developments thereof, and reasonably inferable there from.

3.1.3 Order of Precedence: These documents are integral parts of the Contract, and a requirement occurring on one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In cases of discrepancy, the governing order of documents shall be as follows:

- 3.1.3.1 Permits from Agencies as required by law
- 3.1.3.2 Change Orders
- 3.1.3.3 Contract Documents, General Provisions and Special Provisions in that order
- 3.1.3.4 Technical Specifications
- 3.1.3.5 Construction Plans
 - 3.1.3.5.1 Dimensions given in figures govern scaled dimensions.
 - 3.1.3.5.2 Detail drawings govern over general drawings.
 - 3.1.3.5.3 Addenda/Change order drawings govern over Contract documents.
- 3.1.3.6 FDOT Roadway and Traffic Design Standards, January, latest edition (if applicable).
- 3.1.3.7 FDOT Standard Specifications, for Road & Bridge Construction, latest edition (if applicable).
- 3.1.3.8 North Port Utilities Standard Details and Specifications

3.1.4 Conformity of Work with Plans: All work performed and all materials furnished shall be in reasonably close conformity with lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the Plans or indicated in the Technical Specifications or Special Provisions.

3.1.5 Authority of the City: All work shall be done under the supervision of the City or the City's representative and performed to its satisfaction. It is agreed by the parties hereto that the City shall decide all questions and disputes which may arise relative to the interpretation of the plans, construction, prosecution, and fulfillment of the Contract, and as to the character, quality, amount, and value of any work done, and material furnished, under or by reason of the Contract.

3.1.6 City's Status: The City and/or the City's Representative shall examine and inspect the work to assure compliance with the requirements of these Contract Documents. The City and/or the City's Representative shall determine the quality and acceptability of materials and workmanship relative to the requirements of the Plans and Technical Specifications.

The City has the authority to:

3.1.6.1 Stop the work whenever such stoppage may be necessary to insure the proper execution of the Contract.

3.1.6.2 Reject all work that does not conform to the Contract.

3.1.6.3 Resolve questions that arise in the execution of the work.

The City's Representative has the authority to:

3.1.6.4 Reject all work that does not conform to the Contract.

3.1.6.5 Resolve questions that arise in the execution of the work.

3.1.7 *Suspension of Work:* The City may at any time suspend work by giving ten (10) calendar days notice to the Contractor in writing. The City shall reimburse the Contractor for expenses incurred by the Contractor in connection with work under the Contract as a result of such suspension, unless such suspension was caused by actions of the Contractor. However, if the work or any part thereof shall be stopped by a notice in writing aforesaid, and if the City does not give written notice to the Contractor to resume work within thirty (30) calendar days of the date fixed in the written notice to suspend, then the Contractor will be entitled to the estimates and payment for all work done, unless such suspension was caused by actions of the Contractor.

3.1.8 *The City's Right to do Work:* If the Contractor should neglect to prosecute the work properly or fail to perform in accordance with the provisions of this Contract, the City, after three days written notice, may without prejudice to any other remedy it may have, make good any deficiencies and deduct from the payment due the Contractor.

3.1.9 *The City's Right to Terminate Contract:* If the Contractor refuses or fails to complete the work within the time specified for this Contract, or any extension thereof, the City may terminate the Contractor's right to proceed. In such event, the City may take over the work and prosecute the same to completion by the Contract or otherwise and the Contractor will be liable for any excess cost occasioned by the City. The City may take possession of and utilize in completing the work such materials and equipment as may be on the site of the work and necessary therefore.

If the Contractor should be adjudged bankrupt, or should make a general assignment for the benefit of his/her creditors, or if a receiver should be appointed due to insolvency, or if he/she should refuse or fail, except in cases which a time extension is provided to supply enough workmen, or if he/she should fail to make payment to subcontractors for labor and/or material, or disregard laws, ordinances or the instructions of the City, or be guilty of a violation of a provision of the Contract, then the City may, without prejudice to any other right or remedy and after giving seven (7) calendar days' notice, terminate employment of the Contractor and possess materials, tools, and appliances thereon and finish work by methods it may deem expedient. Expenses incurred by the City and the damage incurred through the Contractor's default shall be borne by the Contractor.

In any circumstance, the City shall have the right to unilaterally cancel, terminate or suspend this Contract, in whole or in part, by providing the Contractor thirty (30) calendar days written notice by certified mail.

In the event of termination, the Contractor shall be entitled to compensation for services rendered and costs incurred through the effective date of termination. All finished or unfinished documents, material, or work shall become the property of the City and shall be delivered to the City without reservation.

3.1.10 *City May Stop the Work:* If the Work is defective, or the Contractor fails to supply sufficient skilled supervisory personnel or workmen or suitable materials or equipment or the work area is deemed unsafe, the

City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other party. The City will not award any increase in Contract Price or Contract Time if the Work is stopped due to the circumstances described herein.

3.1.11 City's Decision: The City shall, within a reasonable time after their presentation, make decisions in writing on claims by the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

3.1.12 Authority and Duties of City's Inspectors: The City's Inspectors shall be authorized to inspect all work done and all materials furnished. They shall be authorized to call to the attention of the Contractor any failure of the work or materials to conform to the Technical Specifications and Contract. The presence of the Inspector shall in no way lessen the responsibility of the Contractor.

3.1.13 Inspection of Work: The City and its representative shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and inspection. If the Specifications/Conditions, the City's instruction, laws, ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give to the City timely notice of its readiness for inspection and, if the inspection is by an authority other than the City, the date fixed for such inspection. Inspections by the City shall be promptly made and, where practicable, at the source of supply. If any work should be covered up without approval or consent of the City, it must, if required by the City, be uncovered for examination at the Contractor's expense. Re-examination of questioned work may be ordered and the work must be uncovered by the Contractor.

3.1.14 Contractor's Supervision and Employees: The Contractor shall supervise, inspect, and direct the work completely and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequence and procedures necessary for the orderly progress of the work, and to maintain all safety precautions and programs incidental thereto. The Contractor shall at all times enforce strict discipline and good order among his/her employees and shall not employ any unfit person or anyone unskilled in the work assigned to him/her. The Contractor shall be responsible to see that the completed work complies fully with the Contract Documents.

The Contractor will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor.

As the work progresses, the Contractor shall keep on the job at all times an English-speaking Supervisor, Superintendent or designee, technically qualified, who is an employee of the Contractor and who shall not be replaced without written notice and approval of the City. The Superintendent or his/her qualified designee shall be present at the job site and direct the work of subcontractors, as well as employees of the Contractor. This supervisor will be equipped with a communication device enabling him/her to contact suppliers, subcontractors or his/her office who in turn can convey necessary communications to others. The Contractor shall issue all communications to the City or his/her representative.

The Contractor's Superintendent shall be present on the job site **at all times** while work is in progress and shall be available by phone for emergencies twenty-four hours per day, seven days per week. Failure to

observe this requirement shall be considered suspension of the work by the Contractor until such time as such Superintendent is again present on the job.

If the Contractor, in the course of the work, finds any discrepancy between the drawing and the physical conditions of the site, or any errors or omissions in drawing, or in the construction layout points and instructions, he/she shall immediately inform the City, in writing, and the City shall promptly verify same. Any work done after such discovery will be done at the Contractor's risk.

Neither party shall employ or hire any employee of the other party without the concurrence of each party.

3.1.15 Contractor's Understanding: It is understood and agreed that the Contractor has, by careful examination, satisfied himself/herself as to the nature and locations of the work, the conformation of the ground, the character, quality, and quantity of materials to be encountered, the character of equipment and facilities needed prior to and during prosecution of the work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the City, either before or after execution of this Contract, shall affect or modify the terms or obligations herein contained.

3.1.16 Permits and Regulations: Permits and licenses necessary for the prosecution of the work shall be secured by the Contractor and paid for by the City, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the specifications and drawings are at variance therewith, he shall promptly notify the City in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the City, he/she shall bear all costs arising there from.

3.1.17 Protection of Work and Property: The Contractor shall continuously maintain protection of all his/her work from damage and shall protect the City's property from injury or loss arising in connection with this Contract. He/she shall adequately protect adjacent property as provided by law and the Contract Documents. He/she shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority or local conditions. In an emergency affecting the safety of life or of the work, or of adjoining property, the Contractor, without special instruction or authorization from the City, is hereby permitted to act, at his discretion, to prevent such threatened loss or injury, and he/she shall so act, without appeal, if so instructed or authorized. Any compensation claimed by the Contractor on account of emergency work shall be determined by agreement between the Contractor and the City.

The Contractor shall not occupy private land outside of any easements or rights of way unless a written authorization has been signed by the property owner. It shall be the Contractor's responsibility to obtain and provide these agreements prior to construction, if required. Prior to the use of private lands, the Contractor shall submit a copy of the agreement(s) to the City. In the event the Contractor uses private property for any purpose without first having obtained the necessary approvals from the property owner and provided the necessary agreements to the City, the City will direct the Contractor in writing to immediately cease using such property.

Prior to application for final payment, the Contractor shall provide documentation from the owner of each piece of private property for which an agreement for use was provided, or for which the City has issued written notification to the Contractor, that each owner is satisfied with the manner in which the Contractor has restored the property. Final payment or reduction in retainage shall not be paid until such documentation is

received by the City.

3.1.18 Changes in the Work: The City, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted accordingly. Such work shall be executed under the conditions of the original Contract. The change and amount of compensation must be agreed upon in writing in a document of equal dignity herewith prior to any deviation from the terms of this Contract.

In giving instructions, the City shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work. Except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the City; and no claim for an addition to the Contract sum shall be valid, unless ordered. Value of any such extra work or change shall be determined in one or more of the following ways:

- 3.1.18.1** By estimate and acceptance in a lump sum.
- 3.1.18.2** By unit prices named in the Contract or subsequently agreed upon.
- 3.1.18.3** By cost and percentage or by cost and a fixed fee.

If none of the previous methods are agreed upon, the Contractor, provided he/she receives an order as above, shall proceed with the work. In such case and also under case, he/she shall keep amendment in such form as the City may direct, a correct amount of the net cost of labor and materials, together with vouchers. The City shall certify to the amount, including reasonable allowance for overhead and profit, due to the Contractor. Pending final determination of value, no payment on changes shall be made. When requiring a change in the scope of services the Contractor shall notify the City by written notice that a change order is requested within five (5) days of any occurrence.

3.1.19 Deductions for Uncorrected Work: If the City deems it inexpedient to correct work injured or done not in accordance with the Contract, some equitable deductions from the Contract price shall be made thereof.

3.1.20 Delays and Extension of Time: If the Contractor should be delayed at any time in the progress of work by any act of negligence by the City or its employees or by any other Contractor employed by the City, or by changes ordered in the work, or by such causes beyond the Contractor's control, or by delay authorized by the City, or by any cause which the City shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the City may decide. However, no time delay shall be allowed if judged by the City to be caused by the Contractor's negligence.

No such extension shall be made for delay occurring more than seven (7) calendar days before claim therefore is made in writing to the City. In the case of a continuing cause of delay only one (1) claim is necessary. This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

3.1.21 Correction of Work Before Final Payment: All work, materials, whether incorporated in the work or not, all processes of manufacturer, and all methods of construction shall be at all times and places subject to the inspection of the City who shall be the final judge of quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet City's approval; they shall be forthwith reconstructed, made good, replaced, and/or

corrected, as the case may be, by the Contractor at his/her own expense. Rejected material shall be immediately removed from the site. If, in the opinion of the City, any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as the City, in its judgement, finds to be equitable.

3.1.22 Contractor Right to Stop Work or Cancel Contract: If the work should be stopped under an order of any court or other public authority for a period of three (3) months through no act or fault of the Contractor or of anyone employed by him, or if the City fails to pay the Contractor within thirty (30) calendar days of maturity and presentation of any sum certified by the City, then the Contractor may, upon seven (7) calendar days written notice to the City, stop work and terminate this Contract.

3.1.23 Removal of Equipment: In the case of annulment of this Contract before completion from any cause whatever, the Contractor, if notified to do so by the City, shall promptly remove any part or all of his equipment and supplies from property of the City and/or site of work, failing which the City has the right to remove such equipment and supplies at the Contractor's expense.

3.1.24 Use of Completed Portions: The City has the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work of such portions may not have expired, but taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the work, the Contractor shall be compensated as the City may determine and the City approves.

3.1.25 Payments Withheld: The City may withhold payment to the Contractor from loss on account of:

- 3.1.25.1** Defective Work not remedied.
- 3.1.25.2** Claims filed or evidence indicating probable filing of claims.
- 3.1.25.3** Failure of the Contractor to make payment properly to Subcontractors or for material/labor.
- 3.1.25.4** A reasonable doubt that the Contract can be completed for the balance then unpaid.
- 3.1.25.5** Damage to another Contractor.

3.1.26 Damages: Any claim for damage arising under this Contract shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work, and shall be adjusted by agreement.

3.1.27 Assignment: Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him/her hereunder without the previous written consent of the City.

3.1.28 Right of Various Interests: Before work being done by the City's forces or by other Contractor's forces, contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the City before such commencement, to secure the completion of the various portions of the work in general harmony.

3.1.29 Separate Contracts: The City reserves the right to let other Contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage

of their materials and execution of the work and shall properly connect and coordinate his/her work with theirs. If any part of the Contractor's work depends on proper execution or results upon the work of any other Contractor, the Contractor shall inspect and promptly report to the City any defects in such work that render it unsuitable for such proper execution and results. His/her failure to so inspect and report shall constitute an acceptance of the other Contractors work as fit and proper for the reception of his work, except as to defects, which may develop on the other Contractor's, work after execution of his work.

3.1.30 Subcontractors: The Contractor shall provide a list of Subcontractors with his/her proposal for approval. The Contractor shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between City or City's Engineer of Record and any Subcontractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of City or City's Engineer of Record to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. City or City's Engineer of Record may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to Contractor on account of specific Work done in accordance with the schedule of values.

Substitutions must be submitted in writing and shall be subject to the approval by the City. To insure proper execution of his/her subsequent work, the Contractor shall measure work already in place and shall at once report to the City any discrepancy between the executed work and the drawings.

Acceptance of any such Subcontractor, person or organization shall not constitute a waiver of any right of the City, City's Representative, or Engineer to reject defective Work, material or equipment; or, Work, material or equipment not in conformance with the requirements of the Contract Documents.

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

The Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the City.

All Work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor.

The Contractor shall be responsible for the coordination of the trades, Subcontractors and materialmen engaged upon his Work.

- The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of these General Conditions and other Contract Documents insofar as applicable to the Work of Subcontractors, and to give the Contractor the same power in regard to terminating any subcontract that the City may exercise over the Contractor under any provisions of the Contract Documents.
- The City, City's Representative, or Engineer will not undertake to settle any differences between the Contractor and his Subcontractors or between Subcontractors.

- If in the opinion of the City, City's Representative, or Engineer, any Subcontractor on the Project proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.

3.1.31 *Horizontal and Vertical Control:* Unless noted otherwise in the Contract documents, the Contractor shall be responsible for the layout of all Contract work. The Contractor shall employ or retain any/all professional services that are required by the Contract to complete the work. The Contractor shall carefully preserve benchmarks, reference points and stakes, and, in case of willful or careless destruction, be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

3.1.32 *Lands for Work:* The City shall provide the lands upon which the work under this Contract is to be done, except that the Contractors shall provide land required for the erection of temporary construction facilities and storage of material, together with the right of access to same.

3.1.33 *Cleaning Up:* The Contractor shall, at such times as may be required by the City, remove from the City's property and from all public and private property, at his/her own expense, all temporary structures, used materials and equipment, rubbish and waste materials resulting from his/her operations. All damaged areas will be restored by the Contractor to their original conditions and approved by the City. By submission of a bid, the Contractor assumes full responsibility for the associated expenses. There shall not be an increase in time or price associated with such removal, and payment to Contractor may be withheld until such work is completed.

3.1.34 *Guarantee:* The Contractor shall warrant all equipment furnished and work performed by him/her for a period of one (1) year from the date of written acceptance of the work, final completion by the City or as may be otherwise specified. Any faulty work or equipment will be fully corrected at no cost to the City and restored work will be warranted for one year from the date of acceptance, or as may be otherwise specified. This will not release additional warranties required by other sections or provided by individual suppliers.

The making and acceptance of final payment shall not waive any claim for faulty work appearing after final payment or for failure to adhere strictly to the Contract documents. If any part of the project is guaranteed for a longer period, such longer period shall prevail. Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from use of inferior materials, equipment or workmanship for one (1) year from the date of completion or written acceptance by the City, whichever is later.

3.1.35 *Responsibility Regarding Existing Utilities and Structures:* The existence and location of underground utilities indicated on the plans are not guaranteed and shall be investigated and verified in the field by the Contractor before submitting a bid. Excavation in the vicinity of existing structures and utilities shall be done by hand. The Contractor shall be responsible for any damage to, and for maintenance and protection of, existing utilities and structures from any damage resulting from said excavation. The Contractor is to include within his line item bid prices the costs to protect, support, relocate, or move (whether shown or not shown on the proposed project set of plans) all underground utilities, which may be in conflict with the construction of the proposed project.

3.1.36 *Accidents:* The Contractor shall provide equipment and medical facilities as necessary to supply first aid to anyone who is injured in connection with the work. The Contractor must promptly report in writing to the City accidents arising out of, or in conjunction with the performance of the work, whether in, or adjacent

to, the site, which causes death, personal injury, or property damages, giving full details and statements of witnesses. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the City. If a claim is made by anyone against the Contractor or Subcontractor on account of an accident, the Contractor shall promptly report the facts in writing to the City, giving full details of the claim.

3.1.37 Stage Plans: Stage plans of structural alterations, cofferdams, dredging, furnished or approved by the City, shall be adhered to unless objected to in writing by the Contractor, but the submission or approval of stage plans by the City shall not relieve the Contractor of full responsibility for the work.

3.1.38 Measurement of Quantities: The quantities of work performed will be computed by the City on the basis of measurement taken by the City or its assistants, and these measurements shall be final and binding. All work computed under the Contract shall be measured by the City according to the United States Standard Measurement and Weights. The City does not assume any responsibility that the final quantities will remain in accord with estimated quantities, nor shall the Contractor claim misunderstanding or deception because of such estimate of quantities.

The estimated quantities of work to be done and material to be provided may be increased, decreased, or omitted, as provided herein. Any increase in quantities shall be approved by the City prior to any work.

3.1.39 Reference to Other Specifications: Where reference is made to specifications such as ASTM, AWWA or AASHTO, the latest edition shall be used.

3.1.40 Sanitary Facilities: The Contractor shall provide and maintain, in a sanitary condition, facilities for his/her employees as are required by local and state boards of health.

3.1.41 Quality of Equipment and Materials: To establish standards of quality, the City may, in the specifications, refer to products by name and/or catalog number. This procedure is not to be construed as eliminating from competition other products of equal quality by other manufacturers where fully suitable in design.

3.1.41.1 The Contractor shall furnish a complete list of proposed desired substitutions prior to signing of the Contract together with such engineering and catalog data as the City may require.

3.1.41.2 The Contractor shall abide by the City's judgment when proposed substitute items of equipment are judged unacceptable and shall furnish the specified item of equipment in such case. All proposals for substitutions shall be submitted in writing by the General Contractor. The City will approve or disapprove proposed substitutions in writing within a reasonable time.

3.1.42 Codes and Laws: The successful bidder shall comply with all Federal, State, Local Laws and Ordinances that affect the Contract in any way.

3.1.43 Traffic Control: The Contractor shall comply with the National Committee on Uniform Traffic Control and Devices (NCUTCD) standards established by the Federal Highway Commission and the 2016 (or most current) FDOT Standards for Traffic Control Through Work Zones and maintain safe conditions at all times.

3.1.44 Exploration and Reports: If reference is made to identification of reports of explorations and tests

of subsurface, or other project specific, conditions at the site that have been used in preparing the Contract documents, it should be understood that these reports are not part of the Contract documents. The Contractor shall have full responsibility with respect to subsurface, or other project specific, conditions at the site. Technical data, made available only at the Contractor's request, may not be sufficient for construction purposes. Additional investigations may be necessary for the purposes of carrying out the construction project. If the Contractor desires additional subsurface, or other applicable project specific, investigation, it will be done at his/her expense, prior to bidding. Limited Subsurface, or other project specific, reports for this project are available through NPU.

If the Contractor has elected not to make subsurface, or other project specific, investigation prior to bidding, he/she shall not be entitled to any extra compensation or Contract change orders due to conditions encountered.

3.1.45 Existing Structures: Drawing of physical conditions in or relating to existing surface and subsurface structures which are at or contiguous to the site that have been utilized by the consultant and/or the City in preparation of the Contract documents. The Contractor may rely upon the accuracy of the technical data contained in such drawing but not for the completeness thereof for the purpose of preparing or submitting a bid. Except as previously indicated, the Contractor shall have full responsibility with respect to physical conditions in or relating to such structures.

3.1.46 Report of Differing Conditions: If the Contractor believes that any technical data on which he/she relies is inaccurate, or if any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected, or referred to in the Contract documents, the Contractor shall promptly, after becoming aware and before performing any work in connection therewith (except in emergency situations), notify the City in writing about the inaccuracy of difference. The City will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise the City in writing (with a copy to the Contractor) of the City's findings and conclusion. Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required; provided, however, the time prescribed therefore may be extended by the City.

No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

3.1.47 Not Shown or Indicated: If an underground facility is uncovered or revealed at or contiguous to the site, which was not shown or indicated and of which the Contractor could not reasonably have been expected to be aware, the Contractor shall promptly, before performing any work (except in emergencies), identify the owner of such underground facility and give written notice thereof to that owner and to the City. The Contractor will review the underground facility to determine the extent to which the documents should be modified to reflect and substantiate the consequences of the existence of the underground facility. With City approval, the Contract documents will be amended or supplemented to the extent necessary. During such time, the Contractor shall be responsible for the safety and protection of such underground facility. The Contractor shall be allowed an increase or an extension of time, or both, to the extent that they are attributable.

3.1.48 Progress Meeting: Progress meetings will be conducted bi-weekly or as required if requested by Contractor or the City.

3.2 Storage of Materials

3.2.1 Contractor shall, at its expense, receive, unload, store in a secure place, and deliver from storage to the construction site all materials and equipment required for the performance of the Contract.

3.2.2 Contractor is not entitled to payment for same except for those materials which in City's discretion are properly stored and are going to be installed or incorporated into the construction of the Project within thirty (30) days of delivery to the construction site.

3.2.3 The storage facilities and methods of storing shall meet City's approval and shall be in accordance with manufacturer's recommendations, or City will not be obligated to pay for same.

3.2.4 Materials and equipment subject to degradation by outside exposure shall be stored in a weather tight enclosure provided by Contractor at its expense.

3.2.5 City may at its discretion require material to be stored in an air-conditioned location.

3.2.6 Provided the above conditions are met, the stored materials may be included in a subsequent Application for Payment if the Contractor also complies with the following:

3.2.6.1 An applicable purchase order is provided listing the materials in detail and identifying the Contract Documents, by name, with verification that the total value of the purchase order amount reconciles with the corresponding application for payment stored materials line item value.

3.2.6.2 Evidence that proper storage security is provided.

3.2.6.3 The City is provided legal title (free of liens or encumbrances of any kind) to the material that is stored or stockpiled.

3.2.6.4 The Contractor and/or its Subcontractor have provided insurance for the Stored Materials against loss, damage (from whatever source), or disappearance, including loss or theft prior to incorporation into the Work. By execution of the Contract, Contractor releases City from any responsibility for Stored Materials and assumes all liability for and risk of loss or damage, by whatever means, including City's alleged negligence, regardless of whether the City has paid for said Stored Materials.

3.2.7 Once any Stored Material is paid for by City, it shall not be removed from the designated storage area except for incorporation into the Work or upon subsequent written approval by City.

3.2.8 No Applications for Payment shall be submitted nor payments made based on the value of materials stored at locations other than the Project, unless otherwise approved in writing by the City.

3.2.9 It is further agreed between the parties that the transfer of title and the City's payment for any Stored Material pursuant to the Contract Documents shall in no way relieve the Contractor of the responsibility for providing and installing such material in accordance with the requirements of the Contract Documents.

- 3.2.10** The Contractor warrants that title to all of the Work or Stored Materials covered by the Application for Payment will pass to the City either by incorporation in the Project or upon receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security, interest or encumbrance; and that none of the Work and none of the Stored Materials covered by the Application for Payments will have been acquired by the Contractor, or by any other person performing the Work at the site or providing materials and equipment to the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such person.
- 3.2.11** In the event stored materials which City is paying for in advance of their being installed or incorporated into the Project pursuant to this Paragraph are not installed or incorporated into the Project within thirty (30) days of when they are delivered to the site, Contractor shall not be entitled to payment for any future stored materials on this Project and the amounts previously approved for payment for said materials shall be deducted from the Contractor's next application for payment.

END OF SECTION II

SECTION III. SPECIAL PROVISIONS

SP-01 INTENT: The purpose of this project is to obtain a competent, experienced and responsible Contractor to construct the project in accordance with the plans and specifications, in an expeditious manner that reasonably protects the public and adjacent property from the construction of the project.

The Contract Documents comprise the entire agreement between City and Contractor concerning the work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the project. The work specified herein shall consist of furnishing all supervision, labor, equipment, material and any incidentals required for the successful completion of all work as specified herein. All work shall conform within the limits as specified and shown and be in conformance with the appropriate Technical Specifications contained herein.

The plans, technical specifications, and other documents provided are intended to provide the Contractor with known conditions of the existing site and proposed work area. The Contractor is responsible to conduct any and all investigation, survey, or other activities required to fully understand the existing site and conditions that will be encountered during the project, and on which their bid will be based. Additional investigations may be necessary for the purposes of carrying out the construction project. The City of North Port will not consider or approve any claim for additional time or monetary compensation submitted by the Contractor caused by unknown site conditions or a failure by the Contractor to fully investigate and understand the full extent and nature of the work. This includes, but is not limited to, existing utilities as well as subsurface conditions.

SP-02 EQUIPMENT: The Contractor shall only use equipment, machines, or combination of machines that are in good and safe working condition. The equipment shall produce results that meet or exceed the Technical Specifications stated herein.

Equipment incapable of providing this will not be acceptable for use on this Project. The Contractor shall not use equipment which is unsafe or in need of repair. Work completed with equipment, which is not properly functioning, shall be deemed unacceptable.

SP-03 CONSTRUCTION SCHEDULE: The work will be substantially complete within 90 calendar days with final completion within 30 calendar days after attaining Substantial Completion as established by the City. The date for **Final Completion** of the Project shall be established as **120 calendar days after** Notice to Proceed.

The Contractor shall furnish copies of the Construction Schedule to the City when requested to perform the work as outlined in the Bid Form. The City will notify the Contractor of such as needed work and the Contractor will provide a Construction Schedule to the City within thirty (30) days of the City's notification. A project update meeting will be held bi-weekly, or as required during contract.

SP-04 PRE-CONSTRUCTION CONFERENCE: A Pre-Construction Conference will be held, at which time the Contractor shall submit the following for the City's approval or acceptance:

A telephone list specifying the name, address, office phone number and cell phone numbers of all subcontractors or suppliers to be used on this project. If the Contractor proposes to subcontract any survey work that may be required, the Contractor shall include the registration number of the surveyor. The telephone list shall also include emergency telephone numbers. The Contractor shall include a 24-hour

emergency telephone for the City's use, which the Contractor shall update as necessary throughout the project. The Contractor shall request, in writing, any changes in subcontractors or suppliers.

No change in subcontractors or suppliers shall be made without written consent from the City.

- In addition to the telephone and facsimile numbers, the Contractor shall provide an e-mail address where emails can be sent. The e-mail address must be monitored at least daily and capable of transferring electronic files.
- The Contractor shall submit to the City a list of equipment the Contractor proposes to utilize on this project.
- The Contractor shall submit for City approval a paper copy and electronic copy of a Construction Schedule prepared using City approved software, and a Schedule of Progress Payment Requests.
- The Contractor shall also submit all other materials or mix designs, which will be used by the Contractor for this Contract.

Mobilization may not start until all submittals have been accepted by the City and/or City's Representative. Once approved, no changes will be allowed without the written approval of the City and/or the City's Representative.

The Contractor shall also provide, on a monthly basis, an update to the Construction Schedule reflecting changes made as a result of such reasons as weather, breakdowns, and unanticipated delays, as a means of better monitoring the project.

SP-05 PROGRESS MEETING: For this project, progress meetings shall be bi-weekly during or as needed. The Contractor shall designate a representative to attend Progress Meetings held at the North Port Utilities Office, 6644 West Price Boulevard, North Port, Florida. The Contractor shall submit, at each meeting, up-to-date schedule information, a written projected schedule for the next two weeks, written claims for additional compensation, written claims for weather days to extend the Contract, results of all testing and Value Engineering Proposals. The City will use the updated schedule information to monitor the Contractor's production rate. Upon written notice from the City, the Contractor shall dedicate additional resources to increase the production rate such that the Contractor will be back on schedule. Failure to comply with the approved Construction Schedule shall result in the Contractor being considered in default and subject to suspension of this Contract. Contractor may request progress meetings be on a different schedule than bi-weekly provided the City can confirm work is proceeding expeditiously. City may require a return to bi-weekly progress meetings at any time.

SP-06 COOPERATION WITH UTILITIES: The Contractor shall notify all utility owner(s) affected by the construction prior to beginning work. Any expense of utility repair or other damage due to Contractor's operations shall be borne by the Contractor. Protection of utilities shall be the responsibility of the Contractor, who shall provide adequate protection to maintain proper service.

NOTE: The Contractor is to include within his bid prices, the costs to protect, and/or support, all above ground, overhead and underground utilities, which may be in conflict with the construction of this proposed project.

Attention is called to the Florida Underground Facility Damage Prevention and Safety Act defined in Florida Statute. This act provides for a "One Call Toll Free" telephone number to be used by all parties doing excavation, demolition or other underground construction.

SP-07 CONTRACT TIME: The Contractor specifically agrees that it will commence operations within a mutually agreed upon time following notification by the City to commence work and that all work to be performed under the provisions of this Contract shall be completed not more than **120 calendar days after** Notice to Proceed subject only to delays caused through no fault of the Contractor or acts of God. Time is of the essence in the performance of this

Contract. The contract time includes up to fourteen (14) calendar days for City and/or City's Engineer of Record review of each submittal and resubmittal. There shall be no extension of time provided for modification and corrections or re-submittals to address deficiencies therein identified during the review by the City and/or City's Engineer of Record.

The work will be substantially complete within **90 calendar days** with final completion within **30 calendar days** after attaining Substantial Completion as established by the City. The entire project work will be substantially complete within - **90 calendar days** of the Notice to Proceed; with **final completion within 30 calendar days** after attaining Substantial Completion as established by the City. City shall provide the Contractor with a listing of items to be corrected or completed (punch list) after Substantial Completion is issued. The punch list will identify the remaining items that must be addressed to the satisfaction of the City by the Contractor to meet his/her obligations under the Contract. The Contractor shall complete all items on the punch lists to the satisfaction of the City prior to submittal of the application for final payment.

All extensions to the Contract time for permitted delays shall be by Change Order and signed by the City.

SP-08 PROJECT COMPLETION: Project final completion shall be defined as "the stage in the progress of the Work where the Work is complete in accordance with the Contract Documents so that the City can begin to utilize the Work for its intended use, all punch list items are complete, and the Contractor has completely demobilized from the project area." Project final completion shall not be more than **120 calendar days** of the Notice to Proceed.

SP-09 LIQUIDATED DAMAGES: The work shall be completed within the contract time as required by SP-08 "PROJECT COMPLETION." The contract time shall include the preparation, submittal, review and approval of submittals, delivery of materials, and construction, assembly, adjustment and placement into service for beneficial use of all facilities covered under this Contract. The City of North Port shall issue a Notice of Completion when it has determined that the work identified in the contract has been completed per SP-08 "PROJECT COMPLETION."

The City and the Contractor hereby agree that time is of the essence on this Contract and the City will suffer damages if the work is not completed within the contract time as required by SP-07 "Contract Time". It is further recognized and agreed by the City and the Contractor that the determination of the exact value of the damages the City would suffer due to a delay in the Completion of the work would be a difficult, time consuming and costly process. It is therefore hereby agreed by the City and the Contractor that it is in their mutual interest to establish a figure of **THREE HUNDRED SEVENTY-THREE DOLLARS (\$373.00)** as Liquidated Damages (but not as a penalty) to be paid by the Contractor to the City for each calendar day that Completion is delayed beyond the Contract Time. It is mutually agreed by the City and the Contractor that neither shall make any claim to increase or reduce the amount to be paid under Liquidated Damages as the result of any calculation of actual damages suffered by the City as the result of delay in the Completion of the work.

For all contracts, regardless of whether the contract time is stipulated in calendar days or working days, the City will count default days in calendar days. If the Contractor or, in case of his default, the surety fails to complete the work within the time stipulated in the Contract, or within such extra time that the City may have granted the Contractor or, in case of his default, the surety shall pay to the City, not as a penalty, but as liquidated damages, in the amount of **THREE HUNDRED SEVENTY-THREE DOLLARS (\$373.00)** per calendar day in which work is not completed.

The City has the right to apply, as payment on such liquidated damages, any money the City owes the Contractor.

The City does not waive its right to liquidated damages due under the Contract by allowing the Contractor to continue and finish the work, or any part of it, after the expiration of the Contract Time including granted time extensions.

In the case of default of the Contract and the completion of the work by the City, the Contractor and his surety are liable for the liquidated damages under the Contract, but the City will not charge liquidated damages for any delay in the final completion of the City's performance of the work due to any unreasonable action or delay on the part of the City.

The City considers the Contract complete when the Contractor has completed all work and the City has accepted the work. The City will then release the Contractor from further obligation except as set forth in his bond.

SP-10 DAMAGES: Areas adjacent to the construction that are damaged shall be repaired at the Contractor's expense. Restoration of adjoining areas shall be equal to or better than original condition and to the satisfaction of the City. Protection of personal property, utilities, structures, access drives, conduits, pavement, curbs, sidewalks, trees, and shrubs shall be the responsibility of the Contractor, who shall provide adequate protection to maintain proper service.

SP-11 CONTINUOUS PROSECUTION OF WORK: The Contractor shall continuously prosecute the work in accordance with the Contract Documents. Upon written direction from the City, the Contractor shall remove any personnel for the duration of the Contract, who fails to comply with the Contract Documents.

Once commencing the project, the operation must be continuously prosecuted during normal hours to its completion. At no time, shall the Contractor suspend work, for any reason for more than seven (7) calendar days, excluding delays granted for inclement weather. Should the Contractor fail to perform any work on the project for three (3) or more work days, the Contractor shall submit a written request to the City, no less than twenty-four (24) hours in advance of the restart of work, to allow the City to schedule the required inspection personnel. No work may restart, prior to the expiration of the twenty-four (24) hour notice without the City's approval.

Correction of safety concerns will be given priority and shall be corrected as soon as practicable, but not later than 24 hours after discovery by the City and notification to the Contractor. Failure to comply with these Provisions and/or Technical Specifications shall result in the Contractor being considered in default and subject to suspension of this contract.

SP-12 SAFETY AND PROTECTION:

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. Contractor shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to:
 - i. All employees on the work and other persons or organizations who may be affected thereby.
 - ii. All the work and materials and equipment to be incorporated therein, whether in storage on or off the site.
- B. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation or replacement in the course of construction. Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of person or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- C. All personnel working within the City's right-of-way shall at all times wear City approved safety vests, including personnel who may only briefly be out of their vehicle (i.e., supervisors, truck drivers).
- D. No open excavations are allowed on the project. Any pipe installation shall be backfilled properly the

same day of work on such pipe area to allow safe passing of pedestrians and vehicles. The Contractor shall immediately remove any personnel who fail to conform to this requirement.

E. Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be the contractor's superintendent unless otherwise designated in writing by Contractor to City.

SP-13 CHANGES IN THE WORK: The City, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted accordingly. Such work will be an **amendment to the contract** and shall require approval by the City Manager prior to prosecution of the additional work. The change and amount of compensation must be agreed upon in writing in a document of equal dignity herewith prior to any deviation from the terms of this Contract. In giving instructions, the City shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work. Except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the City; and no claim for an addition to the Contract sum shall be valid, unless ordered.

Contingency: An amount added to an estimate to allow for items, conditions, or events for which the state, occurrence, or effect is uncertain and that experience shows will likely result, in aggregate, in additional costs. All contingency items will require approval from the Purchasing Manager or designee, the Finance Director and City Manager prior to any work being performed.

Value of any such extra work or change shall be determined in one or more of the following ways:

1. By estimate and acceptance in a lumpsum.
2. By unit prices named in the contract or subsequently agreed upon.
3. By cost and percentage or by cost and a fixed fee.
4. By Change order executed by CityManager
5. By Contingency Authorization (executed by City Manager).

If none of the previous methods are agreed upon, the Contractor, provided he receives an order as above, shall proceed with the work. In such case and also under case, he shall keep amendment in such form as the City may direct, a correct amount of the net cost of labor and materials, together with vouchers. The City shall certify to the amount, including reasonable allowance for overhead and profit, due to the Contractor. Pending final determination of value, no payment on changes shall be made.

SP-14 AVAILABILITY OF LANDS: Work is not planned to occur within City rights of way or existing utility easements. Work is not planned to occur within FDOT rights of way. The Contractor will not need to obtain a right of way use permit(s) from the City of North Port for this project.

SP-16 COORDINATION OF THE SPECIFICATIONS: Where conflicts between the City of North Port General Provisions, Special Provisions, Technical Specifications and Construction Plans, references, should they exist, it is the responsibility of the bidding Contractor to bring those conflicts to the attention of the Purchasing Agent prior to the bid date. After bids, have been received, the Contractor will be held to the most stringent requirement.

The Contractor shall take no advantage of any apparent error or omission in the plans or specifications. If the Contractor discovers such an error or omission, he shall immediately notify the City. The City will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

SP-17 CONSTRUCTION PERMITS: The Contractor shall be responsible for obtaining and complying with all permit

requirements of the Department of Health Permit. Pressure testing the system shall be paid for by the Contractor. Permits and licenses necessary for the prosecution of the work shall be secured by the Contractor.

For this project, Right of Way (ROW) permit(s) will not be required.

SP-18 NOTICE-OF-INTENT (NOI): If necessary, the Contractor for the project shall submit a Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, along with the permit fee with the Florida Department of Environmental Protection.

SP-19 CONTRACTOR'S UNDERSTANDING: It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and locations of the work, the conformation of the ground, the character, quality, and quantity of materials to be encountered, the character of equipment and facilities needed prior to and during prosecution of the work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the City, either before or after execution of this Contract, shall affect or modify the terms or obligations herein contained.

SP-20 ERRORS OR OMISSIONS IN PERMITS, PLANS OR SPECIFICATIONS: The Bidder shall take no advantage of any apparent error or omission, which may be discovered in the Permits, Plans or Specifications but shall forthwith notify the City Representative of such discovery, who will then make such correction and interpretations as deemed necessary for reflecting the actual spirit and intent of the Permits and Specifications.

SP-21 ROAD/LANE CLOSURE: No road closures are allowed. However, if required and applicable, a lane closure request must be submitted in writing five (5) business days in advance of the requested lane closure. The time and length of closure(s) shall be approved by the City of North Port. The Contractor shall provide a Maintenance of Traffic (MOT) Plan for the requested lane closure(s) for review and approval by the City of North Port.

SP-23 MAINTENANCE OF TRAFFIC: The Contractor shall be responsible for all maintenance of traffic and obtaining approval of a Maintenance of Traffic (MOT) Plan from the City for work within the ROW of any City Road. The Contractor shall maintain traffic at all times during construction.

SP-24 DEWATERING: The Contractor shall request approval from the City of North Port Project Manager before applying for a permit from the Southwest Florida Water Management District for dewatering if required for this project. The Contractor pays the fees associated for obtaining this permit.

SP-25 PRIVATE PROPERTY: The Contractor shall not occupy private land outside of any easements or rights of way unless a written authorization has been signed by the property owner. It shall be the Contractor's responsibility to obtain these agreements prior to construction, if required. Prior to the use of private lands, the Contractor shall submit a copy of the agreement(s) to the City. In the event that the Contractor uses private property for any purpose without first having obtained the necessary approvals from the property owner or provided the necessary agreement to the City, the City will direct the Contractor in writing to immediately cease using such property.

Prior to application for final payment, the Contractor shall provide documentation from the owner of each piece of private property for which an agreement for use was provided, or for which the City has issued written notification to the Contractor, that each owner is satisfied with the manner in which the Contractor has restored the property. Final payment or reduction in retainage shall not be paid until such documentation is received by the City.

Any areas, outside of the rights-of-way or easements that are impacted or damaged by the Contractor's activities shall be repaired at the Contractor's expense to the property owner's satisfaction. Restoration of impacted areas shall be

equal to or better than original condition and to the satisfaction of the property owner. The Contractor shall be responsible to secure written approval of the restoration of the property from the property owner and submitting a copy to the City prior to requesting Substantial Completion. The City shall not release retainage to the Contractor until such time as the approvals are submitted by the Contractor.

SP-26 RESIDENTS CONCERNS: During the work of this Contract, residents may contact the City to question the progress of the work or express concerns regarding the work. These concerns are responded to by City's Utilities Department, but normally the Contractor will have more detailed information on the actual scheduling of the work or corrective measures required. Therefore, the Contractor will provide a telephone number and email address where City's Utilities Department can fax or email inquiries. The Contractor shall respond to these inquiries within two (2) business days detailing how the inquiry will be addressed and the time frame the Contractor will take in addressing this inquiry. City's Utilities Department will maintain a log of inquiries, which will be reviewed at each progress meeting.

SP-27 TESTING: Any and all testing requirements born out of, but not limited to contract requirements and permits, for the installation of utility piping, including but not limited to, pressure testing, will be included in the Contractor's bid price. Testing shall include all utilities installed as part of the work of these Contract Documents. Testing will be arranged in advance with an independent testing firm (also included in the bid price) for the testing of concrete and compaction. The City requests to be notified three (3) business days in advance of any test in order to have a City representative and the Engineer of Record, if required, present. Where less time for notice is specified in the specifications or plans, this special provision shall prevail.

SP-28 MISCELLANEOUS ITEMS: Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation, or usable structure or plant, providing the indicated function, shall be furnished and installed without change in the Contract Price. Such miscellaneous items and accessories shall be of the same quality standards, including material, style, finish, strength, class, weight and other applicable characteristics, as specified for the major component of which the miscellaneous items or accessory is an essential part, and shall be approved by the City's Engineer of Record before installation. The above requirement is not intended to include major components not covered by or inferable from the Drawings and Specifications.

SP--29 SOURCES OF WATER FOR TESTING, CLEANING, AND OTHER CONSTRUCTION PURPOSES: Pipe pressure and flow testing and flushing may be done with potable water. If potable water is required for the Work of this Contract, all Contractors' connection(s) to the City potable water supply shall allow the City to meter the amount of water used. All potable water connections shall include a reduced pressure zone backflow preventer. The Contractor is responsible for obtaining meter(s), backflow preventers, and associated appurtenances, and paying all appropriate fees/deposits. Contractor shall not use any potable water until meter and backflow preventer are installed. The Contractor will set up an account with the City and will be billed at the City's normal rates for actual potable water used. Any fees/deposits due back to the Contractor will be returned after the project is completed and the meter is removed.

SP--30 PRE-INSTALLATION VIDEO: No construction shall take place prior to the City's acceptance of the Pre-Installation Video. The video shall thoroughly capture the intended work area as outlined in the Contract Documents. The Pre-Installation Video will be used to protect all parties involved in the project.

SP--31 PERIODIC CLEAN UP AND RESTORATION: During construction, the Contractor shall regularly remove from site and properly dispose of all accumulated debris and surplus material of any kind that result from their operations. The Contractor shall remove unsightly mounds of earth, large stones, boulders, and debris so the site presents a neat appearance. Burial of construction debris is not permitted. Unused tools and equipment shall be stored at the Contractor's yard or base of operations for the project. When the contract work involves ROWs, private property,

roadways, private driveways or access roads, easements and sidewalks, and any site work that may impede pedestrian or vehicular traffic while the installation work is in progress, the Contractor shall backfill, grade, compact, and otherwise restore the area to the basic condition which existed prior to work in order to allow vehicular and pedestrian use. All areas should be restored to their original design grade to facilitate drainage.

SP--32 MAINTENANCE OF FLOW: It is the Contractor's responsibility to maintain the flow of the existing potable water, wastewater force mains, sanitary sewers, plant headworks with bypass pumping as needed and lift stations during the construction. Maintenance of flow is considered incidental to the work and shall be done at no additional cost to the City.

SP--33 CITY RIGHT-OF-WAY RESTORATION: If applicable to this project, any ROW restoration includes all procedures to restore the ROW to a condition equal to or better than the original condition to the satisfaction of the City. The Contractor shall be responsible for restoration of items including but not limited to existing structures, stabilized roads, and ground areas damaged during construction.

During installation of new utilities, the Contractor shall maintain, an undisturbed existing buffer strip of ground cover measuring a minimum of one foot (1') in width from the edge-of- pavement (EOP) in order to minimize potential erosion along the pavement edge. The Contractor shall be responsible for all costs to restore this buffer strip if disturbed during construction.

SP--34 LABOR, MATERIALS AND EQUIPMENT: The Contractor will provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order at the site.

The Contractor will furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, local telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work.

All materials and equipment will be new, except as otherwise provided in the Contract Documents. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or approved, such materials shall be delivered to the site in their original packages or container with seals unbroken and labels intact.

All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.

SP--35 MATERIALS, EQUIPMENT, PRODUCTS, AND SUBSTITUTIONS: Materials, equipment and products incorporated in the Work must be approved for use before being purchased by the Contractor. The Contractor shall submit to the City a list of proposed materials, equipment or products, together with such samples as may be necessary of him to determine their acceptability and obtain his approval. No request for payment for "or equal" equipment will be approved until this list has been received and approved by the City.

Whenever a material, article or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered per 40 CFR 33.255(c) as referenced in Chapter 62-552, FAC. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the

Contract Documents be reference to brand name or catalog number, and if, in the opinion of the City, such material, article, or piece of equipment is of equal substance and function to that specified, the City may approve its substitution and use by the Contractor. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.

No substitute shall be ordered or installed without the written approval of the City who shall be the judge of equality.

Delay caused by obtaining approvals for substitute materials will not be considered justifiable grounds for an extension of construction time.

Should any work or materials, equipment or products not conform with requirements of the Drawings and Specifications or become damaged during the progress of the Work, such Work or materials shall be removed and replaced, together with any work disarranged by such alteration, at any time before completion and acceptance of the Project. All such work shall be done at the expense of the Contractor.

No materials or supplies for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the Seller. The Contractor warrants that he has good title to all materials and supplies used by him in the Work.

SP--36 USE OF PREMISES: The Contractor shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, permits, and directions of City, and shall not unnecessarily encumber any part of the site.

Contractor shall not overload or permit any part of any structure to be loaded with such weight as will endanger its safety, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

Contractor shall enforce City's instructions in connection with signs, advertisements, fires and smoking.

Contractor shall arrange and cooperate with City in routing and parking of automobiles of his employees, Subcontractors and other personnel, and in routing material delivery truck and other vehicles to the Project site.

SP--37 SURVEY: All survey monuments and benchmarks that may be disturbed during construction shall be referenced and replaced by the Contractor. All monuments and benchmarks disturbed or destroyed by the Contractor or any of his forces through accident or negligence shall be replaced by a Florida Licensed Professional Land Surveyor at the Contractor's expense.

SP--38 MANUFACTURER'S LITERATURE: Manufacturer's literature, when referenced, shall be dated and numbered and is intended to establish the minimum requirements acceptable. Whenever reference is given to codes, or standard specifications or other data published by regulating agencies or accepted organizations, including but not limited to National Electrical Code, applicable State Building Code, Federal Specifications, ASTM Specifications, various institute specifications, and the like, it shall be understood that such reference is to the latest edition including addenda in effect on the date of Bid.

SP--39 BRAND NAMES: Brand names where used in the technical specifications, are intended to denote the standard of quality and performance required of the particular material or product. The term "equal" or "equivalent", when used in connection with brand names, shall be interpreted to mean a material or product that is similar and equal in type, quality, size, capacity, composition, finish, color and other applicable characteristics to the material or product specified by trade name, and that is suitable for the same use and capable of performing the same function, in the

opinion of the City's Engineer of Record, as the material or product so specified. The City's Engineer of Record must approve proposed equal items before they are purchased or incorporated in the Work.

SP--40 RECORD DRAWINGS: The Contractor will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. Record Drawings shall list all equipment removed from existing facilities and provide a dollar value of the asset being removed. These shall be available to the City, City's Representative, City's Engineer of Record, and to the State of Florida Department of Environmental Protection (FDEP), and shall be delivered by him to the City upon completion of the Project. It shall be used for this purpose only. Final payment will not be made until receipt and approval by the City of Record Drawings.

SP--41 RECORD DRAWINGS CERTIFICATION: The certification statement shall be as follows:

"I hereby certify that the as-built location information of the water and/or wastewater facilities shown on these drawings conforms to the Minimum Technical Standards for Land Surveying in the State of Florida, chapter 5J-17.052 (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Division of Consumer Services, Board of Professional Surveyors and Mappers in 2010, and that said as-builts are true and correct to the best of my knowledge and belief as surveyed under my direction."

SP--42 COMPLETION OF THE PROJECT: The Completion of the project shall be accomplished and finalized prior to submittal of the application for final payment by the Contractor. The City shall determine the date of completion for the project when at the minimum, the following are met as well as all other conditions defined in the Contract Documents:

- All punch list items have been addressed to the satisfaction of the City;
- All testing has been completed and results are satisfactory (including but not limited to Pipe Pressure Test, Concrete, and Compaction Tests);
- Record Drawing requirements have been accepted and approved by the City and all other governmental agencies, if applicable;
- All associated equipment and facilities necessary for the reliable operation of the project are complete in accordance with contract requirements; and,
- All release of liens have been submitted and are satisfactory to the City, certifying that all payrolls, material bills, and other indebtedness incurred by the Contractor in connection with this project have been paid in full.

SP--43 STORED MATERIALS: Payment for stored materials will be made in accordance with Section 3.2 Storage of Materials of the General Provisions.

SP--44 PAYMENT ADJUSTMENT: The following will apply: This Contract will *not* provide for fuel or other payment adjustments due to increase in material costs during the life of the contract.

SP--45 TERMINOLOGY: Throughout the Contract Documents, references to City or Owner shall, where appropriate, refer to the City of North Port, a municipal corporation of the State of Florida. References to Utilities Department and North Port Utilities refer to the City of North Port's Utilities Department and are used interchangeably. References to Engineer or "Resident Project Representative" may, where appropriate, refer to either the City's Engineer of Record for the Project, which is TKW Consulting Engineers, Inc., or to the City's Utilities Engineering Manager.

The terms General Conditions and General Provisions are used interchangeably in the Contract Documents. The terms Special Conditions and Special Provisions are used interchangeably in the Contract Documents.

The term “Contract Documents” is used interchangeably with “Agreement.”

SP--46 WORK HOURS: The Contractor shall conduct work between 7 A.M. and 3:30 P.M. Monday through Friday, which is defined as regular work hours. The Contractor shall not conduct work on Saturdays, Sundays, legal holidays or holidays observed by the City. Work conducted outside of the regular work hours and days shall be permitted only with written permission from the City. Any additional cost incurred by North Port Utilities and/or the Engineer of Record for work outside these hours will be paid by the Contractor.

SP--47 NOTIFICATIONS OF 48 HOURS: Wherever the technical specifications or plans indicate a minimum of 48 hours’ notice to Owner/City or Engineer, this special provision shall prevail dictating a minimum of three (3) business days’ notice to Owner/City or Engineer.

SP--48 QUALIFICATIONS/REFERENCES: Contractor shall submit a minimum of three (3) recent (within the past five (5) years) references of projects of similar size and scope involving water main installation, connections to existing water mains, and all associated testing, miscellaneous work, restoration, and clean-up. Each reference shall include a project description, project location, name and phone number of a contact person, total project amount, and completion date. The City reserves the right to contact references. Bidder is referred to MINIMUM QUALIFICATIONS AND REFERENCE FORM included later herein.

SP--49 LICENSE(S) REQUIREMENT: Certified General Contractor OR Certified Underground Utilities Contractor.

SP--50 CITY'S STATUS: The City shall examine and inspect the work to assure compliance with the requirements of these Contract Documents. The City shall determine the quality and acceptability of materials and workmanship relative to the requirements of the Plans and Technical Specifications. The City has the authority as follows:

1. To stop the work whenever such stoppage may be necessary to insure the proper execution of the Contract.
2. To reject all work which does not conform to the Contract.
3. To resolve questions which arise in the execution of the work.
4. To stop work whenever materials or shop drawings have not been approved prior to placement.

No additional time or compensation will be added to the Contract when stopping the work for the above listed reasons.

SP--51 CRITERIA FOR AWARD: The award shall be let to the lowest responsive, responsible bidder who fulfills all criteria and specifications with consideration to favorable references and whose evaluation by the City indicates that the award will be in the best interest of the City.

The Contractors shall submit pricing for both the ductile iron pipe (4A) and the stainless-steel pipe (4B) alternative. At their sole discretion, the City reserves the right to award either the ductile iron pipe (4A) option or the stainless-steel pipe (4B) alternative option. The Contractor shall have no basis of claim for either time or cost should the City elect to award none, or either of the Alternate Bid item. Other consideration(s) of award shall be local business status, references, equipment list and notice needed prior to commencement. Any unfavorable references may be cause to deem bidder non-responsive. Other considerations of award are favorable references, contractor experience, successfully completed projects and local preference.

The City reserves the right to reject the bid proposal of any bidder who has previously failed to perform properly, or on time, contracts of similar nature; or who is not in a position to satisfactorily perform the contract.

END OF SECTION III

SECTION IV. INSURANCE

Before performing any Contract work, the Contractor shall procure and maintain, during the life of this Contract, the following types of insurance coverage and shall furnish certificates representing such insurance to the City. The policies of insurance shall be primary and written on forms acceptable to the City and placed with insurance carriers approved and licensed by the Insurance Department in the State of Florida and meet a minimum financial AM Best and Company rating of no less than "A- Excellent: FSC VII." No changes are to be made to these specifications without prior written approval by the City Manager or designee. The City Manager or designee may alter the amounts or types of insurance policies required by this Contract upon agreement with Contractor.

WORKERS COMPENSATION: Coverage to apply for all employees for Statutory Limits in compliance with the applicable state and federal laws. The policy must include Employers' Liability with a limit of \$1,000,000 each accident; \$1,000,000 each employee; and \$1,000,000 policy limit for disease.

COMPREHENSIVE GENERAL LIABILITY: Occurrence form required. Aggregate must apply separately to this Contract/job. Minimum \$1,000,000 each occurrence; \$1,000,000 general aggregate; \$1,000,000 products and completed ops; and \$100,000 fire damage. The city is to be name additionally insured.

BUSINESS AUTOMOBILE LIABILITY: To include all vehicles owned, leased, hired and non-owned vehicles with limits of not less than \$1,000,000 per each accident and for property damage and bodily injury, with Contractual liability coverage for all work performed under this agreement. The city is to be named additionally insured.

All insurance policies must be issued by companies of recognized responsibility licensed to do business in Florida and must contain a provision that prohibits cancellation unless the CITY is provided notice as stated within the policy. It is the Contractor's responsibility to provide notice to the CITY.

A. Special Requirements:

1. **Occurrence Basis:** All policies required by this Contract, with the exception of Workers' Compensation, or unless specific approval is given by Risk Management through the City's Purchasing Office, are to be written on an occurrence basis. Claims Made Policies will be accepted for professional and hazardous materials and such other risks only as authorized by the City's Purchasing Office. All Claims Made Policies contributing to the satisfaction of the insurance requirements herein shall have an extended reporting period option or automatic coverage of not less than two (2) years. If provided as an option, the Contractor agrees to purchase the extended reporting period on cancellation or termination unless a new policy is affected with a retroactive date, including at least the last policy year.

2. **Additional Insured:** All policies required by this Contract, with the exception of Workers' Compensation, or unless specific approval is given by Risk Management through the City's Purchasing Office, shall name the City of North Port, its Commissioners, officers, agents, employees and volunteers as their interest may appear under this Contract. This MUST be written in the description of operations section of the insurance certificate, even if there is check-off-box on the insurance certificate. Any costs for adding the City as "additional insured" shall be at the Contractor's expense.

Certificates of Insurance: All certificates of insurance must be on file with and approved by the City before commencement of any work activities under this Contract. All certificate(s) of insurance required herein must be accompanied by a copy of the additionally insured documents/endorsements. (Certificates of Insurance evidencing claims made or occurrences form coverage and conditions to this Contract, as well as the contract number and description of work, are to be furnished to the City's Purchasing Office (4970 City Hall Boulevard, Suite 337, North Port, FL 34286) prior to commencement of work AND a

1. minimum of thirty (30) calendar days prior to expiration of the insurance contract when applicable. The Certificate of Insurance issued by the underwriting department of the insurance carrier shall certify compliance with the insurance requirements provided herein.
2. Premiums and Deductibles: The Contractor shall be solely responsible for payment of all premiums for insurance contributing to the satisfaction of this Contract and shall be solely responsible for the payment of all deductibles and retention to which such policies are subject, whether or not the City is an insured under the policy. The Contractor's insurance is considered primary for any loss regardless of any insurance maintained by the City. The Contractor is responsible for all insurance policy premiums, deductibles, SIR (self-insured retentions) or any loss or portion of any loss that is not covered by any available insurance policy.
3. Waiver of Subrogation: All required insurance policies are to be endorsed with a waiver of subrogation. The insurance companies, by proper endorsement or thru other means, agree to waive all rights of subrogation against the City, its officers, officials, agents, employees, affiliates and volunteers, and the City's insurance carriers, for losses paid under the terms of these policies that arises from the contractual relationship or work performed by the Contractor for the City. It is the Contractor's responsibility to notify each insurance company of the Waiver of Subrogation and request written authorization or the proper endorsement. Additionally, the Contractor, its officers, officials, agents, employees, volunteers, and any subcontractors, agree to waive all rights of subrogation against the City, its officers, officials, agents, employees, affiliates and volunteers, and the City's insurance carriers for any losses paid, sustained or incurred, but not covered by insurance, that arise from the contractual relationship or work performed. This waiver also applies to any deductibles or self-insured retentions for which the Contractor or its agents may be responsible for.

B. Policy form

- i. All policies, required by this Agreement, with the exception of Professional Liability and Workers Compensation, or unless specific approval is given by Risk Management through the City's Purchasing Office, are to be written on an occurrence basis, shall name the City of North Port, its Commissioners, officers, agents, employees and volunteers as additional insured as their interest may appear under this Agreement. Insurer(s), with the exception of Professional Liability and Workers Compensation, shall agree to waive all rights of subrogation against the City of North Port, its Commissioners, officers, agents, employees or volunteers.
- ii. Insurance requirements itemized in this Agreement, and required of the Contractor, shall be provided by or in behalf of all Subcontractors to cover their operations performed under this Agreement. The Contractor shall be held responsible for any modifications, deviations, or omissions in these insurance requirements as they apply to Subcontractors.
- iii. Each insurance policy required by this Agreement shall:
 1. Apply separately to each insured against whom claim is made and suit is brought, except with respect to limits of the insurer's liability.
 2. Be endorsed to state that coverage shall not be suspended, voided or cancelled by either party except after notice is delivered in accordance with the policy provisions. The Contractor is to notify the City Purchasing Office by written notice via certified mail, return receipt requested.
- iv. The City shall retain the right to review, at any time, coverage, form, and amount of insurance.
- v. The procuring of required policies of insurance shall not be construed to limit Contractor's liability nor to fulfill the indemnification provisions and requirements of this Agreement.

- vi. The Contractor shall be solely responsible for payment of all premiums for insurance contributing to the satisfaction of this Agreement and shall be solely responsible for the payment of all deductibles and retentions to which such policies are subject, whether or not the City is an insured under the policy.
- vii. Claims Made Policies will be accepted for professional and hazardous materials and such other risks as are authorized by the City's Purchasing Office. All Claims Made Policies contributing to the satisfaction of the insurance requirements herein shall have an extended reporting period option or automatic coverage of not less than two (2) years. If provided as an option, the Contractor agrees to purchase the extended reporting period on cancellation or termination unless a new policy is affected with a retroactive date, including at least the last policy year.

Certificates of Insurance evidencing Claims Made or Occurrences form coverage and conditions to this Agreement, as well as the agreement number and description of work, are to be furnished to the City's Purchasing Office (4970 City Hall Boulevard, Suite 337, North Port, FL 34286) prior to commencement of work AND a minimum of thirty (30) calendar days prior to expiration of the insurance contract when applicable. All insurance certificates shall be received by the City's Purchasing Office before the Contractor will be allowed to commence or continue work.

Applicants / bidders should carefully review their existing insurances and consider their ability to meet these requirements prior to submission. The requirements should be forwarded to their agent, broker, and insurance providers for review

END OF SECTION IV

BIDDER CHECKLIST

This checklist is provided to assist each Bidder in the preparation of their bid response. Included in this checklist are important requirements, which is the responsibility of each Bidder to submit with their response in order to make their response fully compliant. This checklist is only a guideline it is the responsibility of each Bidder to read and comply with the Invitation to Bid in its entirety (Instructions to Bidders, General Provisions, Special Conditions and Technical Provisions, Permits, Inspections Reports, Surveys, Insurance Requirements and all City Forms).

- THIS CHECKLIST, complete and sign
- 1. Fill out and sign **Bid Form (acknowledge addenda, bond information, subcontractors and suppliers, and Qualifications/Reference Form** if applicable)
- 2. Fill out and sign **Bid Price Schedule (unit prices must be filled in every block where applicable) (EXCEL SPREADSHEET, DO NOT PDF ON USB DRIVE).**
- 3. Fill out **Statement of Organization** and have it properly notarized.
- 4. Provide **State of Florida Registration** (<http://www.sunbiz.org/search.html>)
- 5. Fill out and sign the **Non-Collusive Affidavit** and have it properly notarized.
- 7. Fill out and sign the **Conflict of Interest Form**
- 8. Fill out and sign **Public Entity Crime Information**
- 9. Fill out and Sign the **Drug Free Workplace Form.**
- 10. Fill out and sign the **“Local Business Affidavit”** or **“North Port Local Business Affidavit”** (not applicable for this project)
- 11. Fill out and sign and **notarize** the **Scrutinized Company Certification Form**
- 12. Fill out and sign **No Lobbying Affidavit**
- 13. Fill out and sign the **SWORN STATEMENT: THE FLORIDA TRENCH SAFETY ACT**
- 14. Provide **any additional documentation requested** within the Bid Document.
- 15. **Submit ONE (1) Original AND ONE (1) Copy of submittal AND Provide USB drive** (pdf of submittal and excel version of the Bid Schedule, If applicable)
- 16. Review **“SAMPLE CONTRACT”**.
- 17. Clearly mark the sealed bid with the **BID NUMBER AND BID NAME** on the outside of the package **AND YOUR COMPANY NAME.**

BID BOND (INCLUDED IN SUBMITTAL)

YES NO

PERFORMANCE BOND IS ONLY TO BE SUPPLIED BY THE AWARDED VENDOR AT TIME OF PRE CONSTRUCTION MEETING.

City of North Port
 Finance Department/Purchasing Division
 Keith Raney, Contract Administrator II
 4970 City Hall, Suite 337
 North Port, Florida 34286

RFB NO. 2019-50 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

BID FORM

Name of Bidder: _____

Business Address: _____

Telephone Number: _____ Fax Number: _____

E-mail Address: _____

Contractor License #: _____

FEID #: _____

To the City Commission of the City of North Port pursuant to and in compliance with your notice inviting sealed bids (Invitation to Bid), Instructions to Bidders, and the other documents relating thereto, the undersigned bidder, having familiarized himself/herself with the terms of the Contract documents, local conditions affecting the performance of the Contract, and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to provide and furnish any and all of the labor, material, tools, expendable equipment, and all utility and transportation services and design of certain items necessary to perform the Contract and complete in a workmanlike manner, all of the work required in connection with the construction of said work all in strict conformity with the plans and specifications and other Contract documents for the prices hereinafter set forth.

The undersigned, as bidder, does hereby declare that he has read the Request for Bids, Instructions to Bidders, General Provisions, Special Provisions, Technical Specifications & Conditions, Insurance Requirements, Bid Form, Permit Fees, Plan Revisions, Plans, and any other reports or documentation for: **HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS** and further agrees to furnish all items listed on the attached Bid Form in accordance with the unit price line items as indicated on the bid schedule form submitted. The above specified documents are herein incorporated into the Bid Form.

The undersigned as bidder, declares that the only persons or parties interested in this submittal as principals are those named herein; that this submittal is made without collusion with any person, firm, or corporation; and he/she proposes and agrees, if the proposal is accepted, that he/she will execute a Contract with the City in the form set forth in the Contract documents and that he/she will accept in full payment thereof the following prices, to wit:

TOTAL BID PRICE OPTION A:

_____ \$ _____
 (TYPE/PRINT) (NUMERIC)

TOTAL BID PRICE OPTION B:

_____ \$ _____
 (TYPE/PRINT) (NUMERIC)

Through the signing of this Bid Form, Bidder attests his/her bid is guaranteed for a period of not less than **NINETY (90) DAYS** from the date of the official bid opening.

Date: _____

Signed (*Person authorized to bind the company*): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

ADDENDA AND BOND FORM

The undersigned acknowledges receipt of the following addenda, and the cost, if any, of such revisions has been included in the bid price.

Addendum No.		Dated		Addendum No.		Dated	
Addendum No.		Dated		Addendum No.		Dated	
Addendum No.		Dated		Addendum No.		Dated	
Addendum No.		Dated		Addendum No.		Dated	

BID BOND AND PERFORMANCE/PAYMENT BOND

BID BOND: ACCOMPANYING THIS PROPOSAL IS _____
(insert: "cash", "bidder's bond", or "certified check", as the case may be) in an amount equal to at least 5% of the total amount of the bid OF THE HIGHEST BID OPTION, payable to the City of North Port. Cashier's checks will be returned to all bidders after award of bid. If supplying a bid bond please use the attached bid bond form.

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the City as liquidated damages in case this proposal is accepted by the City and the undersigned fails to execute a contract with the City as specified in the contract documents accompanied by the required labor and material and faithful performance bonds with sureties satisfactory to the City, and accompanied by the required certificates of insurance coverage. Should the City be required to engage the services of an attorney in connection with the enforcement of this bid, bidder promises to pay City's reasonable attorneys' fees incurred with or without suit.

The undersigned agrees, if awarded this bid, to furnish a Performance and Payment Bond in the amount of 100% of the total project price within ten (10) calendar days after notification of award to the Purchasing Department. The undersigned shall be responsible and bear all costs associated to record Performance and Payment Bond with Sarasota County Clerk's Office. Receipt of said recording and a certified copy of the Bond shall be furnished to the Purchasing Division at the time of the pre-construction meeting.

All contract documents (i.e.; performance and payment bond, cashier's check, bid bond) shall be in the name of "City of North Port".

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

BID SCHEDULE - SUMMARY OF PAYITEMS

It is understood that the estimated summary of pay item quantities are approximate only and are solely for the purpose of facilitating the comparison of bids, and that the Contractor’s compensation shall be computed upon the basis of the actual quantities in the completed work, whether they be more or less than those shown.

Preparation of Bid Schedules: Contractor MUST use the City provided bid schedule below or the provided excel spreadsheet, if provided with the solicitation. **DO NOT RECREATE THIS FORM.** All blank spaces in the Bid Form must be filled in legibly. *Bidder should not reference the words “No Charge, N/A, included, dash, etc.” in any of the blocks. Bidder must identify a monetary amount for each **UNIT COST** and **EXTENDED COST** (unless the unit price is “x” out by the City). **UNIT COST prevails over EXTENDED COST.** Failure to identify a monetary amount in any of the **UNIT COST** line items shall cause bidder to be deemed non-responsive and bid response be rejected.* In case of discrepancy between unit price and extended price, the unit price will govern. Apparent errors in extension will be corrected.

BID FORM OPTION A					
NORTH PORT UTILITIES					
HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$
4A	Install new ductile iron CL53 piping (12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Remove Concrete Pipe Supports, Install new Pipe Supports per Plan. Three (3) Taps and PVC connections	1	LS		\$
5	Install One (1) new 12" BFV, and One (1) new 16" BFV	1	LS		\$
	SUB TOTAL ITEMS 3 - 5				\$
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$
					\$
	TOTAL COST ESTIMATE				\$

BID FORM – Option Alternative B					
NORTH PORT UTILITIES					
HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS					
ITEM	DESCRIPTION	QUANTIT Y	UNI T	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$
4B	Install new stainless steel custom welded piping (SCH20 12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / SCH 10 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Re use pipe supports. Three (3) Taps and PVC connections	1	LS		\$
5	Install one (1) new 12" BFV, and one (1) new 16" BFV	1	LS		\$
	SUB TOTAL ITEMS 3 - 5				\$
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$
					\$
	TOTAL COST ESTIMATE				\$

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

EQUIPMENT AND SUBCONTRACTOR/SUPPLIER LIST

Equipment is located at: _____

The following is a listing of your equipment, inclusive of manufacturer, year and condition. List the condition of equipment/vehicles utilized for this project in accordance with the following scale: **1-Excellent; 2-Good; 3-Fair; 4-Poor**. (Attach additional sheets, if required.)

Description	Manufacturer	Year	Condition	Leased/Owned (If leased, date of expiration)

SOURCE OF SUPPLY AND SUBCONTRACTOR FORM

The following sources of supply and subcontractors shall be used for the RFB NO. **HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS**. If bidder does not have a source of supply or subcontractor, insert "to be determined". When a source or subcontractor is determined, selection will be subject to City approval. (If not applicable, state N/A).

SUBCONTRACTOR(S)
(PLEASE INCLUDE ADDRESS/TELEPHONE NUMBER & E-MAIL)

1. _____
2. _____
3. _____
4. _____

SUPPLIER(S)

1. _____
2. _____
3. _____
4. _____

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

QUALIFICATIONS AND REFERENCES

The Bidder (Company) **shall** have been in Commercial Construction Business with experience in projects involving water main installation, connections to existing water mains, and all associated testing, miscellaneous work, restoration, and clean-up. **Bidder shall demonstrate successful completion of a minimum of three (3) projects completed within the past five (5) years of similar size and scope to the HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS.**

1. Business/Customer Name: _____

Name of Contact Person/Title: _____

Telephone# _____ Fax _____ E-mail _____

Address _____

Phone Number _____

Duration of Contract or business relationship _____

Type of Services Provided _____

Contract Period: FROM _____ TO _____

Contract Price \$ _____ Contract Price at Completion of the Project \$ _____

2. Business/Customer Name: _____

Name of Contact Person/Title: _____

Telephone# _____ Fax _____ E-mail _____

Address _____

Phone Number _____

Duration of Contract or business relationship _____

Type of Services Provided _____

Date: _____

Signed (*Person authorized to bind the company*): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

3. Business/Customer Name: _____

Name of Contact Person/Title: _____

Telephone# _____ Fax _____ E-mail _____

Address _____

Contract Period: FROM _____ TO _____

Contract Price \$ _____ Contract Price at Completion of the Project \$ _____

Phone Number _____

Duration of Contract or business relationship _____

Type of Services Provided _____

Contract Period: FROM _____ TO _____

Contract Price \$ _____ Contract Price at Completion of the Project \$ _____

4. Business/Customer Name: _____

Name of Contact Person/Title: _____

Telephone# _____ Fax _____ E-mail _____

Address _____

Phone Number _____

Duration of Contract or business relationship _____

Type of Services Provided _____

Contract Period: FROM _____ TO _____

Contract Price \$ _____ Contract Price at Completion of the Project \$ _____

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

STATEMENT OF ORGANIZATION

The following information will be provided to the City of North Port for incorporation in legal documents. It is; therefore, vital all information is accurate and complete. Please be certain all spelling, and capitalization is exactly as registered with the state or federal government.

Company Name _____

Telephone # _____ **E-Mail** _____ **Fax #** _____

Main Office Address _____

City _____ **State** _____ **Zip Code** _____

Address of Office Servicing City of North Port, if different than above: **SAME AS ABOVE**

Office Address _____

City _____ **State** _____ **Zip Code** _____

Telephone # _____ **E-mail** _____ **Fax #** _____

Name & Title of Firm Representative _____

Federal Identification Number: _____

Bidder shall submit proof that it is authorized to do business in the State of Florida unless registration is not required by law.

(Please Check One)

Is this a Florida Corporation: Yes or No

If not a Florida Corporation,
 In what state was it created: _____
 Name as spelled in that State: _____

What kind of corporation is it: "For Profit" or "Not for Profit"

Is it in good standing: Yes or No

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

**Authorized to transact business
in Florida:**

Yes or No

State of Florida Department of State Certificate of Authority Document No.: _____

Does it use a registered fictitious name:

Yes or No

Names of Officers:

President: _____ **Secretary:** _____

Vice President: _____ **Treasurer:** _____

Director: _____ **Director:** _____

Other: _____ **Other:** _____

Name of Corporation (As used in Florida):

(Spelled exactly as it is registered with the state or federal government)

Corporate Address:

Post Office Box: _____

City, State Zip: _____

Street Address: _____

City, State, Zip: _____

STATE OF _____

COUNTY OF _____

Sworn to and subscribed before me this ____ day of _____, 20____, by _____
who is personally known to me or has produced his/her driver's license as identification.

Notary Public - State of Florida

Print Name: _____

Commission No: _____

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

NON-COLLUSIVE AFFIDAVIT

State of _____ }
County of _____ } SS.

Before me, the undersigned authority, personally appeared:
_____ who, being first duly sworn, deposes and says that:

- 1. He/She is the _____ (Owner, Partner, Officer, Representative or Agent) of _____, the Respondent that has submitted the attached reply;
- 2. He/She is fully informed respecting the preparation and contents of the attached reply and of all pertinent circumstances respecting such reply;
- 3. Such reply is genuine and is not a collusive or sham reply;
- 4. Neither the said Respondent nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other respondent, firm, or person to submit a collusive or sham reply in connection with the work for which the attached reply has been submitted; or have in any manner, directly or indirectly sought by agreement or collusion, or communication or conference with any respondent, firm, or person to fix the price or prices in the attached reply or of any other respondent, or to fix any overhead, profit, or cost elements of the reply price or the reply price of any other respondent, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the reply work.

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

By: _____

(Printed Name)

(Title)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this ___ day of _____, 20___, by _____ who is personally known to me or has produced his/her driver's license as identification.

Notary Public - State of Florida
Print Name: _____
Commission No: _____

NOTARY SEAL:

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

CONFLICT OF INTEREST FORM

F.S. §112.313 places limitations on public officers (including advisory board members) and employees’ ability to contract with the City either directly or indirectly. Therefore, please indicate if the following applies:

PART I.

- I am an employee, public officer or advisory board member of the City
_____ (List Position Or Board)
- I am the spouse or child of an employee, public officer or advisory board member of the City
Name: _____
- An employee, public officer or advisory board member of the City, or their spouse or child, is an officer, partner, director, or proprietor of Respondent or has a material interest in Respondent. “Material interest” means direct or indirect ownership of more than 5 percent of the total assets or capital stock of any business entity. For the purposes of [§112.313], indirect ownership does not include ownership by a spouse or minor child.
Name: _____
- Respondent employs or contracts with an employee, public officer or advisory board member of the City
Name: _____
- None of The Above

PART II:

Are you going to request an advisory board member waiver?

- I will request an advisory board member waiver under §112.313(12)
- I will NOT request an advisory board member waiver under §112.313(12)
- N/A

The City shall review any relationships which may be prohibited under the Florida Ethics Code and will disqualify any bidders whose conflicts are not waived or exempt.

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ **Title:** _____

This page to be returned only if Contractor is claiming a North Port Local Business Status
(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

PUBLIC ENTITY CRIME INFORMATION

As provided by F.S. §287.133, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a 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, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

I, _____, being an authorized representative of the Respondent _____,

Located at: _____

City: _____ State: _____ Zip Code: _____, have read and understand the contents above. I further certify that Respondent is not disqualified from replying to this solicitation because of F.S. §287.133.

Signature: _____ Date: _____

Telephone #: _____ Fax #: _____

Federal ID #: _____ E-mail: _____

State of _____

County of _____

Sworn to and subscribed before me this _____ day of _____, 20____, by _____ who is personally known to me or has produced his driver's license as identification.

NOTARY SEAL:

Notary Public - State of Florida
Print Name: _____
Commission No: _____

Date: _____

Signed (Person authorized to bind the company): _____

Name (printed): _____ Title: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

DRUG FREE WORKPLACE FORM

The undersigned Respondent in accordance with Florida Statute §287.087 hereby certifies that _____ does:

(Company Name)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business’s policy of maintaining a drug free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee’s community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug free workplace through implementation of this section.

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

Check one:

- As the person authorized to sign this statement, I certify that this firm complies fully with above requirements.
- As the person authorized to sign this statement, this firm **does not** comply fully with the above requirements.

Signature

Print Name

Date

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

**AFFIDAVIT
Claiming Status as a LOCAL BUSINESS**

****CONTRACTOR MUST MEET ALL 4 REQUIREMENTS BELOW TO CLAIM LOCAL BUSINESS STATUS****

State of _____ }
County of _____ } SS.

Before me, the undersigned authority, personally appeared:

who, being first duly sworn, deposes and says that:

1. I am the _____ (Owner, Partner, Officer, Representative or Agent) of _____, the Bidder that has submitted the attached proposal;

AND

2. I am fully informed respecting the operation and employees of the Bidder;

AND

3. I affirm that the Bidder has maintained a physical business address located within the limits of Sarasota County, Charlotte County or Desoto County for a period of six (6) months or more before submitting this bid, from which the Bidder operates or performs business. The qualifying local address is _____

AND

4. I affirm that at least fifty percent (50%) of the Bidder's employees are residents of the City of North Port. If requested by the City, the bidder will be required to provide documentation substantiating the information given in this affidavit. City of North Port reserves the right to request supporting documentation as evidence to substantiate the information given in this affidavit. Failure to do so will result in the bidder's submission being deemed non-responsive.

Any bidder that misrepresents its status as a local business or North Port local business shall be barred from receiving any City contracts for a period of three (3) years.

State of Florida
County of _____

Sworn to and subscribed before me this _____ day of _____, 20____, by _____ who is personally known to me or has produced his driver's license as identification.

NOTARY SEAL:

Notary Public - State of Florida
Print Name: _____
Commission No: _____

**This page to be returned ONLY if Contractor is claiming a Local Business Status.
{THIS PAGE MUST BE COMPLETED AND SUBMITTED}**

AFFIDAVIT

Claiming Status as a North Port Local Business

****CONTRACTOR MUST MEET ALL 4 REQUIREMENTS BELOW TO CLAIM NORTH PORT BUSINESS STATUS****

State of _____ }
County of _____ } SS.

Before me, the undersigned authority, personally appeared:

who, being first duly sworn, deposes and says that:

1. I am the _____ (Owner, Partner, Officer, Representative or Agent) of _____, the Bidder that has submitted the attached bid;

AND

2. I am fully informed respecting the operation and employees of the Bidder;

AND

3. I affirm that the Bidder has maintained its primary physical business address within the limits of the City of North Port for a period of six (6) months or more before submitting this bid, from which the Bidder operates or performs business. The qualifying local address is

AND

4. I affirm that at least fifty percent (50%) of the Bidder's employees are residents of the City of North Port.

If requested by the City, the bidder will be required to provide documentation substantiating the information given in this affidavit. City of North Port reserves the right to request supporting documentation as evidence to substantiate the information given in this affidavit. Failure to do so will result in the bidder's submission being deemed non-responsive.

Any bidder that misrepresents its status as a local business or North Port local business shall be barred from receiving any City contracts for a period of three (3) years.

State of Florida
County of _____

Sworn to and subscribed before me this _____ day of _____, 20____, by _____ who is personally known to me or has produced his driver's license as identification.

NOTARY SEAL:

Notary Public - State of Florida
Print Name: _____
Commission No: _____

**This page to be returned ONLY if Contractor is claiming a North Port Local Business Status.
(THIS PAGE MUST BE COMPLETED AND SUBMITTED)**

SWORN STATEMENT: THE FLORIDA TRENCH SAFETY ACT
(Complete if applicable)

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC BY AN OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This Sworn Statement is submitted with Bid No. _____ for the construction of _____

2. This Sworn Statement is submitted by _____ whose business address is _____ and (if applicable) its Federal Employer Identification Number (FEIN) is _____.
3. My name is _____
(PRINTED OR TYPED NAME OF INDIVIDUAL SIGNING) and hold the position of _____ with the above entity.
4. The Trench Safety Standards that will be in effect during the construction of this Project are Florida Statute Section 553.60-55.64, Trench Safety Act, and OSHA Standard.
5. The undersigned assures that the entity will comply with the applicable Trench Safety Standards and agrees to indemnify and hold harmless the County and ENGINEER, and any of their agents or employees from any claims arising from the failure to comply with said standard.
6. The undersigned has appropriated \$ _____ per linear foot of trench to be excavated over 5' deep for compliance with the applicable standards and intends to comply by instituting the following procedures: _____
7. The undersigned has appropriated \$ _____ per square foot for compliance with shoring safety requirements and intends to comply by instituting the following procedures:

8. The undersigned, in submitting this Bid, represents that he or she has reviewed and considered all available geotechnical information and made such other investigations and tests as he or she may deem necessary to adequately design the trench safety system(s) he or she will utilize on this Project.

Authorized Signature/Title

Sworn to and subscribed before me

this _____
(date)

Notary Public Signature

(Notary Seal)

My Commission Expires: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

Scrutinized Company Certification Form

Company Name: _____

Authorized Representative Name and Title: _____

Address: _____ City: _____ State: _____ ZIP: _____

Phone Number: _____ Email Address: _____

A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Florida Statutes, section 215.4725, or is engaged in a boycott of Israel.

A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of \$1 million or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Florida Statutes, section 215.473, or with companies engaged in business operations in Cuba or Syria.

CHOOSE ONE OF THE FOLLOWING

- This bid, proposal, contract or contract renewal is for goods or services of less than \$1 million. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel.
- This bid, proposal, contract or contract renewal is for goods or services of \$1 million or more. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel, is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and it does not have business operations in Cuba or Syria.

I understand that pursuant to Florida Statutes, section 287.135, the submission of a false certification may result in the termination of the contract if one is entered into, and may subject the above-named company to civil penalties, attorney's fees and costs.

Certified By: _____
AUTHORIZED REPRESENTATIVE SIGNATURE

Print Name and Title: _____

Date Certified: _____

State of _____
 County of _____

The foregoing instrument was acknowledged before me this ____ day of _____, 20__ by _____ who is personally known to me or who has produced _____ as identification.

 Notary Public

Solicitation/Contract/PO Number (Completed by Purchasing): _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

LOBBYING CERTIFICATION

“The undersigned hereby certifies, to the best of his or her knowledge and belief, that”:

STATE OF _____

COUNTY OF _____

This _____ day _____ of 2019 _____, being first duly sworn, deposes and says that he or she is the authorized representative of _____ (Name of the contractor, firm or individual), and that the vendor and any of its agents agree to have no contact or communication with, or discuss any matter related in any way to any active City of North Port solicitation, with any City of North Port elected officials, officers, their appointees or their agents or any other staff or outside individuals working with the city in respect to this request other than the designated Procurement Official Contact and to abide by the restrictions outlined in the General Terms and Conditions of the Solicitation. Technical questions directed to the project manager, is prohibited. These persons shall not be lobbied, either individually or collectively, regarding any questions for bid, proposal, qualification and/or any other solicitations released by the city. To do so is grounds for immediate disqualification from the selection process. The selection process is not considered final until such a time as the Commission has made a final and conclusive determination.

- (a) No City appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence either directly or indirectly an officer or employee of the City, City Commission in connection with the awarding of any City Contract.
- (b) If any funds other than City appropriated funds have been paid or will be paid to any person for influencing or attempting to influence a member of City Commission or an officer or employee of the City in connection with this contract, the undersigned shall complete and submit Standard Form-L “Disclosure Form to Report Lobbying”, in accordance with its instructions.

Signed, sealed and delivered this _____ day of _____, 2019.

By: _____

(Printed Name)

(Title)

STATE OF _____

COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 2019, by _____ who is personally known to me or has produced his/her driver's license as identification.

Notary Public - State of _____

Print Name: _____

Commission No: _____

(THIS PAGE MUST BE COMPLETED AND SUBMITTED)

CITY OF NORTH PORT

BID BOND

In Compliance with F.S. Chapter 255.051

STATE OF FLORIDA, CITY OF NORTH PORT

KNOW ALL BY THESE PRESENTS, that _____, authorized by law to do business as a _____ contractor in the State of Florida, as Principal, and _____, a Corporation chartered and existing under the laws of the State of _____, as Surety, with its principal offices in the City of _____, and authorized to do business in the State of Florida, and in accordance with Section 255.051, Florida Statutes, are held and firmly bound unto the City of North Port, Florida, in the full and just sum of 5% of the Total Bid Price, in good and lawful money of the United States of America, to be paid upon demand by the City of North Port, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, and assigns, joint and severally and firmly by these presents.

The condition of the obligation is such, that whereas the Principal has submitted the attached Bid, dated _____, for (_____ HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS, RFB# 2019-50 _____).

NOW, THEREFORE, if the Principal shall withdraw said bid prior to the date of opening the same, or shall within 10 days after the prescribed forms are presented to him for signature enter into a written Contract with City of North Port, Florida, in accordance with the bid as accepted and give a Performance and Payment Bond with good and sufficient surety or sureties as may be required for the faithful performance and proper fulfillment of such Contract and for the prompt payment of all persons furnishing labor or materials in connection therewith or, in the event of failure to enter into such Contract and give such bond within the time specified, if the Principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and/or supplies provided the latter amount to be excess of the amount specified in said bid, then the above obligations shall be void; otherwise, to remain in full force and effect.

IN THE WITNESS WHEREOF, the above written parties have executed this instrument under their several seals dated _____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Witness as to Principal:

(Principal) (SEAL)

(By)

Witness as to Surety:

Printed Name
(SEAL)
(Surety's Name)

(By-As Attorney-in-Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.

CITY OF NORTH PORT

PERFORMANCE AND PAYMENT BOND

In compliance with F.S. Chapter 255.05(10(a) and Code of the City of North Port Sec. 2-414

BOND NO.:

BOND AMOUNT:

_____ \$ _____

CONTRACTOR NAME:

PRINCIPAL ADDRESS:

PRINCIPAL PHONE NO.:

SURETY COMPANY NAME:

SURETY AGENT:

PRINCIPAL ADDRESS:

PRINCIPAL PHONE NO.:

CITY NAME:

PRINCIPAL ADDRESS:

City of North Port, Florida
4970 City Hall Boulevard
North Port, Florida 34286

CITY CONTACT PHONE NO.:

(941) _____

CONTRACT NO.: (if applicable)

PROJECT ADDRESS:

(if applicable)

DESCRIPTION OF PROJECT:

(if applicable)

DESCRIPTION OF

IMPROVEMENT:

By this Bond, we, _____, as Principal, hereinafter called Contractor, and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____, as Surety, hereinafter called Surety, are held firmly bound unto the City of North Port, Florida, as Obligee, hereinafter called City, in the amount of _____ Dollars (\$_____), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, entered into a contract with City for _____

In accordance with drawings and specifications prepared by _____

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

NOW, THEREFORE, THE CONDITION OF THIS BOND is such that if Contractor:

1. Performs the Contract dated _____, between Contractor and City for construction of **HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS, RFB # 2019-50** the Contract being made a part of this bond by reference, at the times and in the manner prescribed in the Contract; and
 2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Contractor with labor, materials, or supplies, used directly or indirectly by Contractor in the prosecution of the work provided for in the Contract; and
 3. Pays City all losses, damages, expenses, costs, and attorney’s fees, including appellate proceedings, that City sustains because of a default by Contractor under the Contract; and
 4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Any action instituted by City under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the Contract documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety’s obligation under this bond.

In witness whereof, the said Contractor and Surety have signed and sealed this instrument

this

(date)

Principal

By:

As President

(SEAL)

Surety

By:

Any Claims under this bond may be addressed to
(name and address of Surety):

Telephone No: _____

Name and address of agent or representative in Florida if different from above:

Telephone No: _____

**“SAMPLE”
CONTRACT (SUBJECT TO CHANGE)**

This Contract (“Contract”) is made this _____ day of _____, **2019**, by and between the **CITY OF NORTH PORT**, a municipal corporation of the State of Florida, hereinafter referred to as the “City” and XXXXXXX, a Florida limited liability company, ADDRESS, CITY, Florida ZIP CODE, hereinafter referred to as the “Contractor”.

WITNESSETH

That the parties to this Contract, in consideration of their mutual agreements and promises hereinafter contained, bind themselves, their partners, successors, assigns and legal representatives to all covenants, agreements and obligations contained in the agreements and bid documents executed between the parties, and do hereby further agree as follows:

1. RESPONSIBILITIES OF THE CONTRACTOR:

A. Responsibility for and Supervision: The Contractor shall supervise and direct the work to the best of his/her ability, give it all the attention necessary for such proper supervision and direction and not employ for work on the project any person without sufficient skill to perform the job for which the person was employed.

The Contractor assumes full responsibility for acts, negligence, or omissions of all his/her employees on the project, for those subcontractors and their employees, and for those of all other persons doing work under a contract with him/her. All contracts between the Contractor and any such subcontractor as the Contractor shall hire, shall conform to the provisions of the Contract and bid documents and shall incorporate in them the relevant portions of this Contract.

B. Furnishing of Labor and Materials: The Contractor shall provide and pay for all labor, materials, and equipment, including tools, construction equipment and machinery, and all transportation and all other facilities and services necessary for the proper completion of the work in strict conformity with the provisions herein contained, and with the Request For Bid No. 2019-50, including the plans and specifications, addendums and with the proposal submitted by the Contractor and on file with the City. The foregoing Request For Bid (RFB), specifications, and proposal submitted by the Contractor, are hereby specifically made a part of this Contract and are incorporated herein.

The Contractor represents and warrants to the City that all equipment and materials used in the work, and made a part of the structures thereon, or placed permanently in connection therewith, will be new unless otherwise specified in the Contract and bid documents, of good quality, free of defects, and in conformity with the Contract and bid documents. It is understood between the parties thereto that all equipment and materials not in conformity are defective.

C. Incorporation of Bid Documents: The **Request For Bid No. 2019-50**, including the plans, specifications, and addendums, and Contractor’s response to RFB, are specifically made a part of this Contract and are incorporated herein. In the event of a conflict between or among the documents or any ambiguity or missing specifications or instruction, the following priority is established:

1. First, this Contract (Contract No. 2019-50) Approved by Commission, and any attachments
2. Second, Request for Bid, including any and all attachments and addenda
3. Third, Contractor’s response to this solicitation.
4. Fourth, specific direction from the City Manager

D. **Public Records Law:** In accordance with Florida Statutes 119.0701, Contractor shall comply with all public records laws, and shall specifically:

1. Keep and maintain public records required by the City to perform the service.
 - a. The timeframes and classifications for records retention requirements must be in accordance with the General Records Schedule GS1-SL for State and Local Government Agencies. (See <http://dos.dos.state.fl.us/library-archives/records-management/general-records-schedules/>).
 - b. "Public records" means and includes those items specified in Florida Statutes 119.011(12), as amended from time to time, and currently defined as: All documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material, regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business with the City. Contractor's records under this Agreement include but are not limited to, supplier/subcontractor invoices and contracts, project documents, meeting notes, e-mails and all other documentation generated during this Agreement.
2. Upon request from the City's custodian of public records, provide the City, at no cost, with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided for by law. All records kept electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.
3. Ensure that project records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and, if the Contractor does not transfer the records to City following completion of the contract, for the time period specified in General Records Schedule GS1-SL for State and Local Government Agencies.
4. Upon completion of the contract, transfer, at no cost, to the City all public records in Contractor's possession or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall 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 the completion of the contract, the Contractor shall meet all applicable requirements for retaining public records.
5. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CUSTODIAN OF PUBLIC RECORDS, 4970 CITY HALL BOULEVARD, NORTH PORT, FLORIDA 34286, 941.429.7063 OR HOTLINE 941.429.7270; E-MAIL: kpeto@cityofnorthport.com.**
6. Failure of the CONTRACTOR to comply with these requirements shall be a material breach of this Agreement. Further, Contractor may be subject to penalties under Florida Statutes 119.10.

2. CONTRACT PRICE:

In consideration of the foregoing services, work, labor and materials to be furnished by the contractor as per said plans, specifications and addendums, the City agrees to pay and the Contractor \$XXX

The **CONTRACT PRICE** is XXXXXX-XXX (\$XXXX).

3. PAYMENT:

One (1) original requests for payment must be submitted to the City of North Port on a form approved by the City. Each pay request must be accompanied by an updated work schedule to reflect progress of work. Payment shall be accompanied by either written approval and direction of the surety, or receipt of updated affidavits of payment by subcontractors and/or suppliers, in accordance with F.S. §255.05(11). Price shall be net and all invoices payable according to the Florida Local Government Prompt Payment Act (F.S. ch. 218). Upon certification and approval by the City or its duly authorized agent, progress payments may be made to the Contractor upon its application for all services or work completed or materials furnished in accordance with the Contract. Prior to fifty percent (50%) completion, the Contractor will be paid monthly the total value of the work completed and accepted during the preceding month, less ten percent (10%) retainage. After fifty percent (50%) completion of the construction services purchased pursuant to the Contract, the City must reduce to five percent (5%) the amount of retainage withheld from each subsequent progress payment made to the Contractor upon request of the Contractor. For purposes of this subsection, the term "fifty percent (50%) completion" is the point at which the City has expended fifty percent (50%) of the total cost of the construction services purchased as identified in the Contract together with all costs associated with existing change orders and other additions or modifications to the construction services provided for in the Contract. The City shall inform the Contractor's Surety of any reduction in retainage. Contractor must update each new pay request in accordance with any changes made to the previous submittal. The City or its duly authorized administrative agent, shall approve final payment for all work, materials or services furnished under this Contract retainage may be reduced upon issuance of the Certificate of Substantial Completion by the City if, in the sole opinion of the City, sufficient progress on the schedule has been accomplished, all required affidavits have been provided, and the City has retained adequate coverage for the project through the achievement of Final Completion.

4. CONTRACT TIME:

The Contractor specifically agrees that it will commence operations within a mutually agreed upon time following notification by the City to commence work and that all work to be performed under the provisions of this Contract shall be completed in not more than **120 calendar days** from the notice to proceed; subject only to delays caused through no fault of the Contractor or acts of God. The work will be substantially completed within **90 calendar days**; with final completion within **30 calendar days** after attaining Substantial Completion. Time is of the essence in the performance of this Contract.

5. LIQUIDATED DAMAGES:

The work shall be completed within the Contract time specified. The Contract time shall include the preparation, submittal, review and approval of submittals, delivery of materials, and construction, assembly, adjustment and placement into service for beneficial use of all facilities covered under this Contract.

The City shall issue a Notice of Substantial Completion when it has determined that the work identified in the Contract has been substantially completed; record drawings have been submitted and approved by the City and that the facility is operating satisfactorily. The Contract time also includes up to fourteen (14) calendar days for the review of submittals, excluding pay requests, by the City. The City shall provide the Contractor a punch list within two (2) calendar days after the Notice of Substantial Completion is issued. The punch list will identify the remaining items that must be addressed to the satisfaction of the City by the Contractor to meet his/her obligations under the Contract. The Contractor shall complete the items on the punch list to the satisfaction of the City within twenty-eight (28) additional calendar days of the issuance of the Final Punch List or Notice of Substantial Completion, whichever is later,

and prior to submittal of the application for reduction of retainage or final payment. Any cost incurred by the City (i.e. inspection time) after the twenty-eight (28) calendar day period shall be charged to the Contractor.

The City and the Contractor hereby agree that time is of the essence on this Contract and the City will suffer damages if the work is not substantially completed within the Contract time, plus any extensions thereof allowed by Change Order. It is further recognized and agreed by the City and the Contractor that the determination of the exact value of the damages the City would suffer due to a delay in the Substantial Completion of the work would be a difficult, time consuming and costly process. It is therefore hereby agreed by the City and the Contractor that it is in their mutual interest to establish a figure of **THREE HUNDRED SEVENTY THREE DOLLARS (\$373)** as Liquidated Damages (but not as a penalty) to be paid by the Contractor to the City for each calendar day that Substantial Completion is delayed beyond the Contract Time.

It is mutually agreed by the City and the Contractor that neither shall make any claim to increase or reduce the amount to be paid under Liquidated Damages as the result of any calculation of actual damages suffered by the City as the result of delay in the Substantial Completion of the work.

6. BOND REQUIREMENTS:

- A. Bond Requirements:** The successful bidder shall provide the required performance and payment bond or other acceptable security to the City within **ten (10) business days of being awarded the bid. Failure by the successful bidder to provide the bond within ten (10) business days shall be considered a default under Sec. 2-404 of the City of North Port Administrative Code.** Upon such default the City may immediately award the bid to the next lowest responsive and responsible bidder, and recover from the original successful bidder the difference in cost between the original winning bid and the next lowest responsive and responsible bidder. Such default shall only be curable at the option of the City.

In addition, the Contractor shall be responsible and bear all costs associated to record the Performance and Payment Bond with Sarasota County Clerk's Office. The Contractor shall furnish the receipt of said recording and certified copy of the bond to the Purchasing Department at the time of the pre-construction meeting. Such default shall only be curable at the option of the City.

- B. Performance and Payment Bond:** The Contractor shall provide a Performance and Payment Bond, in the form prescribed in Florida Statutes Section 255.05 in the amount of one hundred percent (100%) of the Contract amount, the costs of which are to be paid by the Contractor. The bond will be acceptable to the City only if the Surety Company:
1. Is licensed to do business in the State of Florida;
 2. Holds a certificate of authority authorizing it to write surety bonds in this state;
 3. Has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is issued;
 4. Is otherwise in compliance with the provisions of the Florida Insurance Code;
 5. Holds a currently valid certificate of authority issued by the United States Department of Treasury under 31 U.S.C. §§ 9304-9308;

6. A current rating of at least Excellent (A or A-) as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc., of 75 Fulton Street, New York, New York 10038; and
7. With an underwriting limitation of at least two times the dollar amount of the contract.

If the Surety Company for any bond furnished by the Contractor files for bankruptcy, has a receiver appointed, is declared bankrupt, becomes insolvent, has an assignment made for the benefit of creditors, has its right to do business terminated in the State of Florida, or ceases to meet the requirements imposed by the Contract Documents, the Contractor shall, within five (5) calendar days thereafter, substitute another Bond and Surety Company, both of which shall be subject to the City's approval.

By execution of this bond, the Surety Company acknowledges that it has read the surety qualifications and surety obligations imposed by the Contract documents and hereby satisfies those conditions.

By execution of this bond, the Surety Company acknowledges that it has read the surety qualifications and surety obligations imposed by the Contract documents and hereby satisfies those conditions.

7. INSURANCE:

Before performing any Contract work, the Contractor shall procure and maintain, during the life of this Contract, the following types of insurance coverage and shall furnish certificates representing such insurance to the City. The policies of insurance shall be primary and written on forms acceptable to the City and placed with insurance carriers approved and licensed by the Insurance Department in the State of Florida and meet a minimum financial AM Best and Company rating of no less than "A- Excellent: FSC VII." No changes are to be made to these specifications without prior written approval by the City Manager or designee. The City Manager or designee may alter the amounts or types of insurance policies required by this Contract upon agreement with Contractor.

A. WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE (PER CHAPTER 440, FLORIDA STATUTES): The Contractor shall procure and maintain during the life of this Contract Worker's Compensation insurance for all its employees to be engaged in work on the project under this Contract and, in case any such work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation insurance for all of the latter's employees to be engaged in such work unless such employees are covered by protection afforded by the Contractor's Workers Compensation insurance. For additional information contact the Department of financial Services, Workers' Compensation Division at 850.413.1601 or on the web at www.fldfs.com. In case any class of employees engaged in hazardous work on the project under this Contract is not protected under the Worker's Compensation Statute, the Contractor shall provide, and shall cause each subcontractor to provide, Employer's Liability Insurance for the protection of such of its employees not otherwise protected under such provisions. The minimum liability limits of such insurance shall not be less than herein specified or in that amount specified by law for that type of damage claim.

Proof of such insurance shall be filed by the Contractor with the City within ten (10) days after the execution of this Contract. Coverage is to apply for all employees in the statutory limits in compliance with the applicable state and federal laws. The policy must include Employers' Liability with a limit of \$1,000,000 for each accident; \$1,000,000 each employee; and \$1,000,000 policy limit for bodily injury or disease.

1. Policy shall contain a waiver of subrogation against the City of North Port, Florida.
2. Contractor's sub-contractors shall be subject to the same minimum requirements identified in this section.

3. If the Contractor has no employees, the Contractor must submit to the City the Workers Compensation Exemption from the State of Florida.

B. COMPREHENSIVE GENERAL LIABILITY – Occurrence Form (CG 00 01): The Contractor shall procure and maintain and require all subcontractors to procure and maintain during the life of this Contract, a comprehensive general liability policy, including, but not limited to, bodily injury, property damage, broad form contractual liability and Explosion, Collapse and Underground (XCU) coverage. The general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

Proof of the following insurance shall be filed by the Contractor with the City within ten (10) days after the execution of this Contract:

- General Aggregate \$1,000,000.
- Each Occurrence \$1,000,000.
- Products and completed ops \$1,000,000.
- Damage to rented premises \$100,000.
- Fire damage \$100,000.

1. The policy shall be endorsed to include the following additional insured language: “City of North Port, Florida, and its commissioners, officers, employees, agents and volunteers shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor.”

2. Contractor’s subcontractors shall be subject to the same minimum requirements identified above.

3. Policy shall be endorsed for a waiver of subrogation against the City of North Port, Florida.

C. BUSINESS AUTOMOBILE LIABILITY: The Contractor shall procure and maintain, and require all subcontractors to procure and maintain, during the life of this Contract, automobile liability insurance including all owned, hired, and non-owned automobiles. Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract. Automobile liability must be written on a standard ISO form (CA 00 01) covering any auto (Code 1), or if Contractor has no owned autos, hired (Code 8) and non-owned (Code 9) autos.

Proof of such insurance shall be filed by the Contractor with the City within ten (10) days after the execution of this Contract.

- Combined Single Limit (CSL) (Ea Accident) \$1,000,000.
- Bodily Injury (per person) \$1,000,000.
- Bodily Injury (per accident) \$1,000,000.
- Property Damage (per accident) \$1,000,000.

1. The policy shall be endorsed to include the following additional insured language: “City of North Port, Florida, and its commissioner, officers, employees, agents and volunteers shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor, including automobiles owned, leased, hired or borrowed by the Contractor.”

2. Contractor's sub-contractors shall be subject to the same minimum requirements identified in this section.

3. Policy shall contain a waiver of subrogation against the City of North Port, Florida.

E. SPECIAL REQUIREMENTS: The City of North Port, Florida, is to be named additional insured on any Comprehensive Commercial General Liability Policy and Auto Policy. All certificates of insurance must be on file with and approved by the City before commencement of any work activities under this Contract.

Any and all deductibles to the above referenced policies are to be the responsibility of the Contractor. The Contractor's insurance is considered primary for any loss regardless of any insurance maintained by the City. The Contractor is responsible for all insurance policy premiums, deductibles, or SIR (self-insured retentions) or any loss or portion of any loss that is not covered by any available insurance policy.

All insurance policies must be issued by companies of recognized responsibility licensed to do business in the State of Florida and must contain a provision that prohibits cancellation unless the City is provided notice as stated within the policy. It is the Contractor's responsibility to provide notice to the City.

This must be written in the description of operations section of the insurance certificate, even if there is check-off- box on the insurance certificate. Any costs for adding the City as "additional insured" shall be at the Contractor's expense. All certificates of insurance must be on file with and approved by the City before commencement of any work activities under this Contract. The Certificate of Insurance must be accompanied by a copy of the additional insured endorsement (CG20101185 or combination of CG20100704 and GC20370704 will be accepted).

F. WAIVER OF SUBROGATION: All required insurance policies, with the exception of Workers Compensation, are to be endorsed with a Waiver of Subrogation. The insurance companies, by proper endorsement or thru other means, agrees to waive all rights of subrogation against the City, its commissioners, officers, officials, employees and volunteers, and the City's insurance carriers, for losses paid under the terms of these polices that arises from the contractual relationship or work performed by the Contractor for the City. It is the Contractor's responsibility to notify their insurance company of the Waiver of Subrogation and request written authorization or the proper endorsement. Additionally, the Contractor, its officers, officials, agents, employees, volunteers, and any subcontractors, agree to waive all rights of subrogation against the City and its insurance carriers for any losses paid, sustained or incurred, but not covered by insurance, that arise from the contractual relationship or work performed. This waiver also applies to any deductibles or self-insured retentions the Contractor or its agents may be responsible for.

G. POLICY FORM:

1. All policies, required by this Contract, with the exception of Workers Compensation, or unless specific approval is given by Risk Management through the City's Purchasing Office, are to be written on an occurrence basis, shall name the City of North Port, Florida, its Commissioners, officers, agents, employees and volunteers as additional insured as their interest may appear under this Contract. Insurer(s), with the exception of Professional Liability and Workers Compensation, shall agree to waive all rights of subrogation against the City of North Port, Florida, its Commissioners, officers, agents, employees, or volunteers.

2. Insurance requirements itemized in this Contract, and required of the Contractor, shall be provided by or on behalf of all subcontractors to cover their operations performed under this Contract. The Contractor shall be held responsible for any modifications, deviations, or omissions in these insurance requirements as they apply to subcontractors.

3. Each insurance policy required by this Contract shall:

a. Apply separately to each insured against whom claim is made and suit is brought, except with respect to limits of the insurer's liability.

b. Be endorsed to state that coverage shall not be suspended, voided or cancelled by either party except after notice is delivered in accordance with the policy provisions. The Contractor is to notify the City Purchasing Office by written notice via certified mail, return receipt requested.

4. The City shall retain the right to review, at any time, coverage, form, and amount of insurance.

5. The procuring of required policies of insurance shall not be construed to limit Contractor's liability nor to fulfill the indemnification provisions and requirements of this Contract. The extent of Contractor's liability for indemnity of the City shall not be limited by insurance coverage or lack thereof, or unreasonably delayed for any reason, including but not limited to, insurance coverage disputes between the Contractor and its carrier.

6. The Contractor shall be solely responsible for payment of all premiums for insurance contributing to the satisfaction of this Contract and shall be solely responsible for the payment of all deductibles and retention to which such policies are subject, whether or not the City is an insured under the policy.

7. Claims Made Policies will be accepted for professional and hazardous materials and such other risks as are authorized by the City's Purchasing Office. All Claims Made Policies contributing to the satisfaction of the insurance requirements herein shall have an extended reporting period option or automatic coverage of not less than two (2) years. If provided as an option, the Contractor agrees to purchase the extended reporting period on cancellation or termination unless a new policy is affected with a retroactive date, including at least the last policy year.

8. Certificates of Insurance evidencing Claims Made or Occurrences form coverage and conditions to this Contract, as well as the contract number and description of work, are to be furnished to the City's Purchasing Office (4970 City Hall Boulevard, Suite 337, North Port, FL 34286) prior to commencement of work AND a minimum of thirty (30) calendar days prior to expiration of the insurance contract when applicable. All insurance certificates shall be received by the City's Purchasing Office before the Contractor will be allowed to commence or continue work. The Certificate of Insurance issued by the underwriting department of the insurance carrier shall certify compliance with the insurance requirements provided herein.

8. INDEMNITY:

A. TO THE EXTENT PERMITTED BY FLORIDA LAW, THE CONTRACTOR SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY, ITS COMMISSIONERS, OFFICERS, AGENTS AND EMPLOYEES, FROM ALL LIABILITIES, FINES, CLAIMS, ASSESSMENTS, SUITS, JUDGMENTS, DAMAGES, LOSSES AND COSTS, INCLUDING CONSEQUENTIAL, SPECIAL, INDIRECT, AND PUNITIVE DAMAGES, (INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND COURT COSTS, WHETHER SUCH FEES AND COSTS ARE INCURRED IN NEGOTIATIONS, AT THE TRIAL LEVEL OR ON APPEAL, OR IN THE COLLECTION OF ATTORNEYS' FEES), ARISING OUT OF ANY ACTS, ACTIONS, BREACHES, NEGLIGENCE OR OMISSIONS OF THE CONTRACTOR, OR CONTRACTOR'S OFFICERS, EMPLOYEES, AGENTS, SUBCONTRACTORS, SUBCONSULTANTS, AND OTHER PERSONS EMPLOYED OR UTILIZED BY THE CONTRACTOR IN THE PERFORMANCE OF, OR THE FAILURE TO PERFORM, THE CONTRACT. THE CONTRACT DOES NOT CONSTITUTE A WAIVER OF SOVEREIGN IMMUNITY OR CONSENT BY THE CITY OR ITS SUBDIVISIONS TO SUIT BY THIRD PARTIES.

B. IN THE EVENT OF A CLAIM, THE CITY SHALL PROMPTLY NOTIFY THE CONTRACTOR IN WRITING BY PREPAID CERTIFIED MAIL (RETURN RECEIPT REQUESTED) OR BY DELIVERY THROUGH ANY NATIONALLY RECOGNIZED COURIER SERVICE (SUCH AS FEDERAL EXPRESS OR UPS) WHICH PROVIDES EVIDENCE OF DELIVERY, AT THE ADDRESS PROVIDED FOR RECEIPT OF NOTICES IN THIS CONTRACT.

C. THE CITY SHALL PROVIDE ALL AVAILABLE INFORMATION AND ASSISTANCE THAT THE CONTRACTOR MAY REASONABLY REQUIRE REGARDING ANY CLAIM. THIS AGREEMENT FOR INDEMNIFICATION SHALL SURVIVE TERMINATION OR COMPLETION OF THE CONTRACT. THE INSURANCE COVERAGE AND LIMITS REQUIRED IN THIS CONTRACT MAY OR MAY NOT BE ADEQUATE TO PROTECT THE CITY AND SUCH INSURANCE COVERAGE SHALL NOT BE DEEMED A LIMITATION ON THE CONTRACTOR'S LIABILITY UNDER THE INDEMNITY PROVIDED IN THIS SECTION. IN ANY PROCEEDINGS BETWEEN THE PARTIES ARISING OUT OF OR RELATED TO THIS INDEMNITY PROVISION, THE PREVAILING PARTY SHALL BE REIMBURSED ALL COSTS, EXPENSES AND REASONABLE ATTORNEY FEES THROUGH ALL PROCEEDINGS (AT BOTH TRIAL AND APPELLATE LEVELS).

D. NOTHING IN THIS CONTRACT SHALL BE DEEMED TO AFFECT THE RIGHTS, PRIVILEGES AND IMMUNITIES OF THE CITY AS SET FORTH IN FLORIDA STATUTES, SECTION 768.28.

E. THE TERMS OF THIS SECTION SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

F. FURTHER, THE CONTRACTOR SHALL FULLY INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF NORTH PORT, FLORIDA, FROM ANY SUITS, ACTIONS, DAMAGES, AND COSTS OF EVERY NAME AND DESCRIPTION, INCLUDING ATTORNEYS' FEES, ARISING FROM OR RELATING TO VIOLATION OR INFRINGEMENT OF A TRADEMARK, COPYRIGHT, PATENT, TRADE SECRET OR INTELLECTUAL PROPERTY RIGHT.

9. CONTRACTOR'S AFFIDAVIT:

When all work contemplated by this Contract has been completed, and has been inspected and approved by the City, or its duly authorized agent, the Contractor shall furnish to the City, a Contractor's Affidavit in a form acceptable to the City. Signed affidavits of payment will also be required by the City from any and all subcontractors hired by the Contractor, unless payment is approved by the surety in accordance with Florida Statutes, section 255.05(11). The affidavits shall state whether the subcontractor(s) has been paid in full or whether there are payments remaining. A list of all subcontractors shall be furnished to the City prior to any payments against the Contract.

10. TERMINATION AND DEFAULT:

The City Manager or designee shall have the right at any time upon thirty (30) calendar days written notice to the Contractor to terminate the services of the Contractor and, in that event, the Contractor shall cease work and shall deliver to the City all documents (including but not limited to reports, designs, specifications, and all other data) prepared or obtained by the Contractor in connection with its services. Upon delivery of the documents, the City shall pay the Contractor in full settlement of all claims by it hereunder as the work actually completed bears to the entire work under the Contract, as determined by the City, less payments already made to the Contractor, and any amounts withheld by the City to settle claims against or to pay indebtedness of the Contractor in accordance with the provisions of the Contract.

A. FUNDING IN SUBSEQUENT FISCAL YEARS: The parties acknowledge and agree that the obligations of the City to fulfill financial obligations of any kind pursuant to any and all provisions of this Contract, or any subsequent contract entered into pursuant to this Contract or referenced herein to which City is a party, are and shall remain subject to the provisions of Florida Statutes, Section 166.241, regardless of whether a particular obligation has been expressly so conditioned. City agrees to exercise all lawful and available authority to satisfy any financial obligations of City that may arise under this Contract; however, since funds are appropriated annually by the City Commission on a fiscal year basis, City's legal liability for the payment of any costs shall not arise unless and until appropriations for such costs are approved for the applicable fiscal year by the City Commission (nor shall such liability arise if, a request for such appropriations is excluded from the budget approved by the City Commission). It is expressly understood by the parties that funding for any subsequent fiscal year of the Contract is contingent upon appropriation of monies by the City Commissioners. In

the event that funds are not available or appropriated, the City reserves the right to terminate the Contract. The City will be responsible for payment of any outstanding invoices and work completed by the Contractor prior to such termination.

B. ABANDONMENT: In the event that the Contractor has abandoned performance under this Contract, then the City Manager or designee may terminate this Contract upon three (3) calendar days' written notice to the Contractor indicating its intention to do so. The written notice shall state the evidence indicating the Contractor's abandonment.

C. The Contractor shall have the right to terminate the Contract only in the event of the City failing to pay the Contractor's properly documented and submitted invoice within ninety (90) calendar days of the approval by the City's Administrative Agent, or if the project is suspended by the City for a period greater than ninety (90) calendar days.

D. The City Manager or designee reserves the right to terminate and cancel this Contract in the event the Contractor shall be placed in either voluntary or involuntary bankruptcy, a receiver is appointed for the Contractor or an assignment is made for the benefit of creditors.

E. BREACH: In the event Contractor breaches this Contract, the City shall provide written notice of the breach and Contractor shall have ten (10) days from the date the notice is received to cure. If the Contractor fails to cure within the ten (10) days, the City Manager or designee shall have the right to immediately terminate the Contract and/or refuse to make any additional payment, in whole or in part, and, if necessary, may demand the return of a portion or the entire amount previously paid to Contractor due to:

1. The quality of a portion or all of the Contractor's work not being in accordance with the requirements of this Contract;
2. The quantity of the Contractor's work not being as represented in the Contractor's Payment Request, or otherwise;
3. The Contractor's rate of progress being such that, in the City's opinion, substantial or final completion, or both, may be inexcusably delayed;
4. The Contractor's failure to use Contract funds, previously paid the Contractor by the City, to pay Contractor's project related obligations including, but not limited to, subcontractors, laborers and material and equipment suppliers;
5. Claims made, or likely to be made, against the City or its property;
6. Loss caused by the Contractor;
7. The Contractor's failure or refusal to perform any of the obligations to the City, after written notice and a reasonable opportunity to cure as set forth above;
8. Violation of any local, state or federal law in the performance of this Contract shall constitute a material breach of this Contract.

9. In the event that the City makes written demand upon the Contractor for amounts previously paid by the City as contemplated in the clause, the Contractor shall promptly comply with such demand. The City's rights hereunder survive the term of this Contract, and are not waived by final payment and/or acceptance.

In the event that the City makes written demand upon the Contractor for amounts previously paid by the City as contemplated in the clause, the Contractor shall promptly comply with such demand. The City's rights hereunder survive the term of this Contract, and are not waived by final payment and/or acceptance.

F. TERMINATION WITH OR WITHOUT CAUSE: The performance of work under the Contract may be terminated with or without cause by the City Manager in whole or in part or whenever the City Manager determines that termination is in the City's best interest. Any such termination shall be effected by the delivery to the Contractor of a written notice of termination at least (30) days before the date of termination, specifying the extent to which performance of the work under the Contract is terminated and the date upon which such termination becomes effective. After receipt of a notice of termination, except as otherwise directed, the Contractor shall stop work on the date of receipt of the notice of termination or other date specified in the notice; place no further orders or subcontracts for material, services, or facilities except as necessary for completion of such portion of the work not terminated; terminate all vendors and subcontracts; and settle all outstanding liabilities and claims. The Contractor will be paid only for such work performed and materials supplied up to the termination. Under no circumstances shall the City make any payment to the Contractor for services that have not been performed or that are performed subsequent to the termination date.

11. INDEPENDENT CONTRACTOR:

The Contractor is, and shall be, in the performance of all work, services and activities under this Contract, an independent contractor, and not an employee, agent or servant of the City. All persons engaged in any of the work or services performed pursuant to this Contract shall at all times, and in all places, be subject to the Contractor's sole direction, supervision, and control. The Contractor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Contractor's relationship and the relationship of its employees to the City shall be that of an independent contractor and not as employees or agents of the City. The Contractor does not have the power or authority to bind the City in any promise, agreement or representation other than as specifically provided for in this Contract. The Contractor shall not pledge the City's credit or make it a guarantor of payment of surety for any contract, debt, obligation, judgment, lien or any form of indebtedness. The Contractor further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Contract.

12. SUBCONTRACTORS AND SUPPLIERS:

Contractor shall furnish to City a list of all subcontractors and/or suppliers prior to any payments against the Contract. All subcontractors are subject to City approval. No change in subcontractors or suppliers shall be made without written consent and approval from the City.

13. LICENSES AND PERMITS/LAWS AND REGULATIONS:

The Contractor shall pay all taxes required by law in connection with the activity in accordance with this Contract including sales, use, and similar taxes, and unless mutually agreed to in writing to the contrary, shall secure all licenses and permits necessary for proper completion of the work, paying any fees therefore. Violation of any local, state or federal law in the performance of this Contract shall constitute a material breach of this contract. The Contractor shall comply with all laws and ordinances, and the rules, regulations, and orders of all public authorities relating to the performance of the work herein. If any of the Contract documents are at variance therewith, the Contractor shall notify the City promptly on the discovery of such variance.

14. AMENDMENT:

This Contract constitutes the sole and complete understanding between the parties and supersedes all agreements between them, whether oral or written with respect to the subject matter. No amendment, change or addendum to this Contract is enforceable unless agreed to in writing by both parties and incorporated into this Contract. In the event the Contractor begins work on unauthorized changes to scope prior to receiving a signed Change Order by the City Manager or designee, the Contractor does so at its own expense and risk as unauthorized work shall not be paid for by the City.

The City Manager or designee may agree to amendments that do not increase compensation to Contractor. The City Commission shall approve all increases in compensation under this Contract.

15. EQUAL EMPLOYMENT OPPORTUNITY:

The City of North Port, Florida, in accordance with the provisions of Title VII of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that it will ensure that in any Contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit replies in response to this advertisement and will not be discriminated against on the ground of race, color or national origin in consideration for an award.

16. NON-DISCRIMINATION:

The City of North Port does not discriminate on the basis of race, color, national origin, sex, age, disability, family or religious status in administration of its programs, activities or services. Pursuant to Florida Statutes, section 287.134(2)(a), 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.

17. ASSIGNMENT:

The Contractor shall not assign any interest in this Contract and shall not transfer any interest in same (whether by assignment or novation) without prior written consent of the City Manager or designee, except that claims for the money due or to become due the Contractor from the City under this Contract may be assigned to a financial institution or to a trustee in bankruptcy. Notice shall be promptly given to the City.

18. NOTICES:

Any notice, demand, communication, or request required or permitted hereunder shall be sent by certified mail, return receipt requested, and shall be mailed and e-mailed to:

As to the City: Michael Vuolo, Project Manager
City of North Port Utilities Department
 6644 W Price Blvd.
 North Port, Florida 34291
 Tel: 941.240. 8001

Fax: 941.240.8022

E-Mail: mvuolo@cityofnorthport.com

**With copies of notices
and demands sent to:**

City of North Port, Florida
City Attorney's Office
4970 City Hall Boulevard
North Port, Florida 34286
aslayton@cityofnorthport.com

As to CONTRACTOR:

Notices shall be effective when received at the addresses specified above. Changes in the respective addresses which such notice is to be directed may be made from time to time by either party by written notice to the other party. Facsimile transmission is acceptable notice effective when received, however, facsimile transmissions received after 5:00 pm or on weekends or holidays, will be deemed received on the next business day. The original of the notice must additionally be mailed as required herein. Nothing in this Article shall be construed to restrict the transmission of routine communications between representatives of Contractor and City.

19. WAIVER:

No delay or failure to enforce any breach of this Contract by either City or Contractor shall be binding upon the waiving party unless such waiver is in writing. In the event of a written waiver, such a waiver shall not affect the waiving party's rights with respect to any other or further breach. The making or acceptance of a payment by either party with knowledge of the existence of a default or breach shall not operate or be construed to operate as a waiver of any subsequent default or breach.

20. ATTORNEY'S FEES:

In any proceedings between the parties arising out of or related to this Contract, the prevailing party shall be reimbursed all costs, expenses and reasonable attorney fees through all proceedings, at both trial and appellate levels.

21. GOVERNING LAW, VENUE AND SEVERABILITY:

The rights, obligations and remedies of the parties under this Contract shall be governed by the laws of the State of Florida and the exclusive venue for any legal or judicial proceedings in connection with the enforcement or interpretation of this Contract shall be in Sarasota County, Florida. The invalidity, illegality, or unenforceability of any provision of this Contract shall in no way affect the validity or enforceability of any other portion or provision of the contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void.

22. PARAGRAPH HEADINGS:

Paragraph headings are for the convenience of the parties and for the reference purposes only and shall be given no legal effect.

23. ENTIRE AGREEMENT:

This Contract (with all referenced plans, attachments, addenda and provisions incorporated by reference) embodies the entire agreement of both parties, superseding all oral or written previous and contemporary agreements between the parties relating to matters set forth in this Contract. In the event of any conflict between the provisions of this Contract and the RFB or Contractor’s bid, this signed Contract (excluding the RFB and Contractor's bid) shall take precedence, followed by the provisions of the RFB, and then by the terms of the Contractor's bid.

24. SCRUTINIZED COMPANIES:

A. As required by section 287.135(5), Florida Statutes, for contracts of \$1,000,000.00 or less, the Contractor shall certify on a form provide by the City, that it is not on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, and that it is not engaged in a boycott of Israel.

B. As required by section 287.135(5), Florida Statutes, for contracts of \$1,000,000.00 or more, the Contractor shall certify on a form provided by the City, that all of the following are true:

1. It is not on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, and that it is not engaged in a boycott of Israel; and
2. It is not on the Scrutinized Companies with Activities in Sudan list or the Scrutinized Companies with Activities in Iran Petroleum Energy Sector list, created pursuant to section 215.473, Florida Statutes; and
3. It is not engaged in business operations in Cuba or Syria.

C. If the Contractor provides a false certification or has been placed on one of the above-noted Lists of Scrutinized Companies, or has engaged in business operations in Cuba or Syria, the Contractor will be in breach of this Contract and the City may terminate the Contract.

D. PENALTY:

1. A Contractor that has been found to have provided a false certification may be subject to a civil penalty equal to the greater of \$2 million or twice the amount of the Contract, plus all reasonable attorney’s fees and costs, including any costs for investigations that led to the finding of the false certification; and
2. Shall be ineligible to bid on any contract with the City for three (3) years after the date the City determined that the Contractor submitted a false certification.

IN WITNESS WHEREOF, the parties have hereto caused the execution of these documents, the year and date first above written.

ATTEST:

CITY OF NORTH PORT, FLORIDA

By: _____
Kathryn Peto, MMC

By: _____
Peter D. Lear, CPA, CGMA, City Manager

APPROVED AS TO FORM AND CORRECTNESS:

By: _____
Amber L. Slayton, City Attorney

WITNESS:
By: _____

CONTRACTOR:
By: _____

Section Number	Title
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DIVISION 1 - GENERAL REQUIREMENTS

SUMMARY

01 11 00	Summary of Work
01 14 19	Occupancy

PRICE AND PAYMENT PROCEDURES

01 22 13	Measurement and Payment
01 25 00	Product Substitution Procedures
01 26 00	Contract Modification Procedures
01 29 73	Schedule of Values
01 29 76	Application for Payment

ADMINISTRATIVE REQUIREMENTS

01 31 13	Coordination
01 31 19.13	Pre-Construction Conferences
01 31 19.23	Progress Meetings
01 32 16	Progress Schedules
01 33 00	Submittal Procedures
01 33 23	Shop Drawings, Product Data, and Samples

QUALITY REQUIREMENTS

01 41 00	Regulatory Requirements
01 42 19	Reference Standards
01 45 16.13	Contractor's Quality Control
01 45 29	Testing Laboratory Services

TEMPORARY FACILITIES AND CONTROLS

01 51 00	Temporary Utilities
01 55 26	Traffic Regulation

Section Number	Title
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PRODUCT REQUIREMENTS

01 61 00	Basic Product Requirements
01 62 00	Product Options
01 65 00	Product Delivery Requirements
01 66 00	Product Storage and Handling Requirements

EXECUTION AND CLOSEOUT REQUIREMENTS

01 73 29	Cutting and Patching
01 74 00	Construction Cleaning
01 77 00	Contract Closeout

DIVISION 33 - UTILITIES

SYSTEM PIPING

33 36 13.03	Pipe, Fittings, Valves, Piping Specialties, and Accessories - General
33 36 13.04	Piping Installation - General
33 36 13.05	Piping Flushing and Cleaning
33 36 13.06	Potable Water Process Pipe Testing
33 36 23.20	Ductile Iron Pipe & Fittings (Optional)
33 36 23.21	Stainless Steel Pipe and Fittings – AISI Type 304 (Optional)
33 36 23.25	ASTM D1785 Schedule 80 PVC Pipe and Fittings
33 36 33.15	Butterfly Valves, Iron Body
33 36 43.53	Piping Sleeves, Adapters, and Couplings

SECTION 01 11 00
SUMMARY OF WORK

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Description of Work covered by Contract Documents.
2. Description of Work by Others.

1.02 WORK COVERED BY SPECIFICATIONS AND DRAWINGS

A. General: The Work to be done under this Contract consists of replacing corroded steel pipe, fittings, and valves located within the Hillsborough Booster Pump Station. This work will require new Ductile Iron or custom welded SST piping, fittings and Iron Body Butterfly Valves (12" & 16") within the confines of the 1 story facility. The completion of the new pressurized pipework and interruption of the existing operation is of a time sensitive nature.

B. The Work includes:

1. Furnishing of all labor, material, superintendence, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, services and other means of construction necessary or proper for performing and completing the Work.
2. Sole responsibility for adequacy of plant and equipment.
3. Maintaining the work area and site in a clean and acceptable manner.
4. Maintaining existing facilities in service at all times except where specifically provided for otherwise herein.
5. Protection of finished and unfinished Work.
6. Repair and restoration of Work damaged during construction.
7. Furnishing as necessary proper equipment and machinery, of a sufficient capacity, to facilitate the Work and to handle all emergencies normally encountered in Work of this character.
8. Furnishing, installing, and protecting all necessary hardware, and all other appurtenances needed for the installation of the piping and devices included in the equipment specified. If not indicated on drawings provide hardware of appropriate size, strength and material for the purpose intended. Furnish substantial templates and shop drawings for installation.

1.6 WORK SEQUENCE

- A. Construct Work in stages to accommodate OWNER's use of premises during construction period and in accordance with the limitations on the sequence of construction specified. Coordinate construction schedules and operations with OWNER's representatives.
- B. Coordinate Work of all subcontractors.

1.7 OWNER OCCUPANCY

- A. OWNER will occupy premises during entire period of construction in order to maintain normal operations. Cooperate with OWNER's representative in all construction operations to minimize conflict, and to facilitate OWNER usage.
- B. Conduct operations so as to inconvenience the general public in the least.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

- A. Start Work within 10 days following the date stated in the Notice to Proceed and execute with such progress as may be required to prevent delay to other contractors or to the general completion of the project. Execute Work at such items and in or on such parts of the project, and with such forces, material and equipment, as to complete the Work in the time established by the Contract. At all times, schedule and direct the Work so that it provides an orderly progression to completion within the specified time for completion.

END OF SECTION 01 11 00

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SECTION 01 14 19

OCCUPANCY

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for site occupancy.

1.02 CONTRACTOR USE OF PROJECT SITE

- A. Contractor's use of project site shall be limited to the Contractor's construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices as provided in the General Conditions.
- B. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Specifications and Drawings and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

1.03 OWNER USE OF PROJECT SITE

- A. Owner may utilize all or part of the existing facilities during the entire construction period for the conduct of the Owner's normal operations.
- B. Contractor shall schedule and coordinate the Work to minimize interference between construction operations and Owner's operation and maintenance of facilities in service.

1.04 OPERATION AND MAINTENANCE OF FACILITIES IN SERVICE

A. Operation

- 1. Owner shall operate facilities as follows:
 - a. Existing facilities that are to remain in service, with modification or improvements, throughout Project duration;
 - b. Existing facilities that are in service prior to modification or demolition under this Project;
 - c. Modified and upgraded facilities that have been completed and accepted by the Owner; and
 - d. New facilities that have been completed and accepted by the Owner.

B. Maintenance

- 1. Owner shall maintain existing facilities that have not been removed from service for modification or demolition.
- 2. Owner shall maintain new facilities and modified facilities that have been accepted.

3. New or modified facilities shall be placed in service prior to acceptance if required to meet regulatory requirements for treatment quality. New or modified facilities shall be placed in service prior to acceptance if required to complete Work on schedule. If new facilities or modified facilities in service prior to acceptance of new or modified facilities, Contractor shall maintain new or modified facilities until new or modified facilities are accepted. Contractor shall provide maintenance at no additional cost to the Owner.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 14 19

SECTION 01 22 13

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. General requirements for Measurement and Payment.

1.02 MEASUREMENT

- A. The quantities set forth in the bid form are approximate and are given to establish a uniform basis for the comparison of bids. The OWNER reserves the right to increase or decrease the quantity of any class or portion of the work during the progress of construction in accordance with the terms of the Contract.

1.03 PAYMENT

- A. Payment shall be made on the basis of work actually performed completing each item in the Bid, such work including, but not limited to, the furnishing of all necessary labor, materials, equipment, transportation, cleanup, and all other appurtenances to complete the construction and installation of the work to the configuration and extent as shown on the drawings and described in the specifications. Payment for each item includes compensation for cleanup and as-builts.
1. Mobilization: The lump sum amount as specified to be paid for mobilization shall include materials, labor, equipment, and services necessary to mobilize all material, labor forces, equipment, tools, and construction facilities at the project site as required to start construction of the Work. This item includes, but is not limited to, all bonds and permits required prior to the start of construction. The amount paid for this item shall not exceed six percent (6%) of the total base bid price. If the bid amount for this item exceeds six percent of the total base bid price, the amount over six percent of the total base bid price shall not be paid prior to substantial completion of the Work.
 2. Close-out: The lump sum amount as specified to be paid for close-out shall include all materials, labor, equipment, and services necessary to complete site clean-up, final submittals, touch-up and repair. The bid amount for this item shall not be less than one and one-half percent (1.5%) of the total base bid price. If the bid amount for this item is less than 1.5 percent of the total base bid price, the difference between 1.5 percent of the total base bid price and the bid amount for this item shall be added to the total base bid amount of the bid for comparison with other bids.

3. Removal of the 12" & 16" Steel Pipe: The lump sum amount as specified to be paid for removal and disposal of the existing exposed 12" & 16" steel pipe and its associated hardware shall include all materials, labor, equipment, and services necessary to complete the Work specified in the drawings.

- 4A. Ductile Iron Piping & Fittings (Option A): The lump sum amount as specified to be paid for all ductile iron piping and fittings shall include the furnishing of all materials, labor, equipment, and services necessary to construct and test the new pipeline, complete and ready for service, as shown on the Drawings and as specified. The work shall include all ductile iron piping, material and labor to reconstruct the 6 concrete pipe supports per plans, flange/coupling adapters, joint restraints, means and methods to secure all connections, three new taps with ball valves and pvc piping, disposal of replaced hardware, protection of existing structures and utilities, flushing, hydrostatic testing, bacteriological testing, and all other work necessary to complete the installation of new piping and fittings. Any valves required for installation shall be measured for payment under the applicable valve types.

- 4B. Stainless Steel Piping & Fittings (Option B): The lump sum amount as specified to be paid for all stainless-steel piping and fittings shall include the furnishing of all materials, labor, equipment, and services necessary to construct and test the new pipeline, complete and ready for service, as shown on the Drawings and as specified. The work shall include all new stainless-steel piping, welded fitting material and labor, flange/coupling adapters, joint restraints, three new taps with ball valves and pvc piping, means and methods to secure all connections, disposal of replaced hardware, protection of existing structures and utilities, flushing, hydrostatic testing, bacteriological testing, and all other work necessary to complete the installation of new piping and fittings. Any valves required for installation shall be measured for payment under the applicable valve types.

5. Butterfly Valves: The unit prices as specified to be paid for all resilient wedge butterfly valves shall include the furnishing of all products and all work including placing and joining valves to pipe lines, valve stem extensions with owner approved handwheels, modifications to current metal floor grating, testing, clean-up, and all other operations necessary to complete the installation of butterfly valves. The actual number of butterfly valves of the sizes furnished and installed in the Work will be measured for payment.

1.04 SCHEDULE OF VALUES

- A. Approval of Schedule: Submit for approval a preliminary schedule of values, in duplicate, for all of the Work. Prepare preliminary schedule in accordance with the General Conditions. Submit preliminary schedule of values within 10 calendar days after the Effective Date of the Agreement. Submit final schedule of values in accordance with the General Conditions.

- B. Format: Utilize a format similar to the Table of Contents of the Project Specifications. Identify each line item with number and title of the major specification. Identify site mobilization, maintenance of traffic, field layout and record drawings, and closeout. Include within each line item, a direct proportional amount of CONTRACTOR's

overhead profit.

- C. Revisions: With each Application for Payment, revise schedule to list approved Change Orders.

1.05 APPLICATION FOR PAYMENT

- A. Required Copies: Submit electronic copy of each application on EJCDC Form No. 1910-8-E (1990) or approved equal.
- B. Execute certification by signature of authorized officer.
- C. Use data from approved Schedule of Values.
- D. Stored Materials: When payment for materials stored is permitted, submit a separate schedule for Materials Stored showing line item, description, previous value received, value incorporated into the Work and present value.
- E. Change Orders: List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of work.
- F. Final Payment: Prepare Application for Final Payment as required in the General Conditions.
- G. Submit an updated construction schedule for each Application for Payment.
- H. Submit application for payment to ENGINEER on, or before, the 25th day of each month.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 22 13

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SECTION 01 25 00

PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes

1. Requirements and procedures for requesting substitutions.
2. Procedures for consideration of proposals for substitution.

1.02 REQUESTS FOR SUBSTITUTIONS

A. Contractor and Sub-Contractors may request substitution of certain products as specified in Section 01 62 00 Product Options.

1. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make application to the Engineer & Owner for acceptance thereof.
2. If Sub-Contractor wishes to furnish or use a substitute item of material or equipment, Sub-Contractor shall make application to the Contractor for acceptance thereof.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract documents.

C. Request constitutes a representation that Contractor, or Sub-Contractor, as appropriate:

1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product;
2. Will provide the same warranty for substitution as for specified product;
3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects, at no additional cost to the Owner; and
4. Waives claims for additional costs which may subsequently become apparent.

1.03 CONSIDERATION OF REQUESTS FOR SUBSTITUTION

A. Engineer will determine acceptability of proposed substitution, and will notify Contractor of acceptance or rejection in writing within a reasonable time.

B. Substitutions will not be considered when acceptance will require substantial revision of Contract Documents.

C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request.

1.04 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR SUBSTITUTIONS

A. Do not submit shop drawings, product data, or samples for substitution prior to acceptance of substitution by Engineer and Owner. Drawings, data, and samples

submitted with request for substitution will not be considered for review under Section 01 33 23 Shop Drawings, Product Data, and Samples.

- B. Shop drawings, product data, and samples for substitutions shall meet the requirements of Section 01 33 00 Submittal Procedures and Section 01 33 23 Shop Drawings, Product Data, and Samples.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 25 00

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Procedures for preparation, submittal, and processing contract modifications.

1.02 SUBMITTALS

- A. General: as specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. The General Provisions, Special Provisions, and conditions of the Contract for construction; and
 - 3. This Section.
- B. Authorized Person: Submit name of the individual authorized to accept changes, and to be responsible for informing others in Contractor's employ of changes in the Work.
- C. Change Order Form: Change Order form as included in the Contract Documents.

1.03 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Maintain detailed records of work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. On request, provide additional data to support computations
 - 1. Itemized quantities of products, labor, and equipment.
 - 2. Taxes, insurance and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work done on a time and material basis, with additional information
 - 1. Origin and date of claim.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.04 MINOR CHANGES

- A. Engineer or Owner will advise of minor changes in the work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by the General Conditions by issuing supplemental instructions.

1.05 PRELIMINARY PROCEDURES

- A. Engineer may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within ten days.
- B. Contractor may propose a change by submitting request for change to the Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 25 00 Product Substitution Procedures.

1.06 LUMP SUM CHANGE ORDER

- A. Will be based on Proposal Request and Contractor's lump sum quotation or Contractor's request for Change Order as approved by Engineer.

1.07 UNIT PRICE CHANGE ORDER

- A. For pre-determined unit prices and quantities, Change Order will be executed on a fixed unit price basis.
- B. For unit costs or quantities of units of work which are not pre-determined, execute Cost Reimbursement Change Order. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material or Force Account Change Order.

1.08 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER

- A. Maintain detailed records of work done on Time and Material or Force Account basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- B. Submit itemized account and supporting data after completion of change, within time limits in Conditions of the Contract. Submit invoices and time sheets signed by Resident Project Representative.
- C. Engineer will determine the change allowable in Contract Sum and Contract Time as provided in Conditions of the Contract.

1.9 EXECUTION OF CHANGE ORDERS

- A. Owner will issue Change Orders for signatures of parties as provided in General Conditions.

1.10 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum as shown on Change Order.
- B. Promptly revise Progress Schedules to reflect any change in Contract Time, revise subschedules to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 26 00

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of Schedule of Values.

1.02 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures; and
 - 2. This Section.

1.03 FORMAT

- A. Submit printed or plotted schedule. Paper size shall not exceed 11 x 17 inches.
- B. Submit schedule in electronic *.pdf format.
- C. Schedule shall meet requirements of funding agency.
- D. Submit schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet or other form acceptable to the Owner.

1.04 SUBSTANTIATING DATA

- A. When Engineer requires substantiating information, submit data justifying line item amounts in question.
- B. Provide one copy of data with cover letter for each copy of Application. Show Application number and date, and line item by number and description.

1.05 CONTENT

- A. List installed value of each major item of Work as a separate line item to serve as a basis for computing values for Progress Payments.
- B. Coordinate listings with Progress Schedule.
- C. The sum of values listed shall equal total Contract Sum.
- D. Revise schedule to list approved Change Orders, with each Contract Application for Payment.
- E. Schedule of Values shall be at a minimum, categorized as follows:
 - 1. Line items shall be itemized and broken out per the Bid Form.

1.06 ENGINEER AND OWNER REVIEW

- A. Schedule of Values shall be submitted to Engineer and Owner within 10 days of Notice To Proceed. Schedule of Values shall be reviewed by Engineer and Owner, as specified in the General Conditions.
- B. Schedule of Values shall meet requirements of Engineer and Owner.
- C. Revise Schedule of Values to meet requirements of Engineer and Owner.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 29 73

SECTION 01 29 76

APPLICATION FOR PAYMENT

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of Applications for Payment.

1.02 SUBMITTALS

- A. General: as specified in:
 - 1. Section 01 33 00 Submittal Procedures; and
 - 2. This Section.

1.03 FORMAT

- A. Periodical Estimate for Partial Payment Form as included in the Contract Documents.
- B. Provide as shown on form included in Contract Documents.

1.04 PREPARATION OF APPLICATIONS

- A. General
 - 1. Lump Sum Contracts: Use data on accepted Schedule of Values. Provide dollar value in each column for each line item for portion of Work performed.
 - 2. Unit Price Contracts: Bid quantity and unit price for each unit price item shall be as shown on the Bid Schedule in the Contractor's Proposal. Provide quantity and unit price extension for each unit price item completed. Partial payment extensions for unit price items shall be mathematically correct.
 - 3. Change Orders: List each authorized Change Order, listing Change Order number and dollar amount as for an original item of Work.
- B. Preparation and Execution
 - 1. Print or plot required information.
 - 2. Execute certification, of each copy of each Application for Payment, by signature of authorized officer.
- C. Application for Final Payment
 - 1. Application for Final Payment shall meet requirements for periodic Applications for Payment.
 - 2. Application for Final Payment shall meet requirements of Section 01 77 00 Contract Closeout relative to Application for Final Payment.
 - 3. Application for Final Payment shall not include stored materials.

1.05 SUBSTANTIATING DATA

- A. When Engineer or Owner requires substantiating information, submit data justifying line item amounts in question.
- B. Provide one copy of data with cover letter with each copy of Application for Payment. Show Application number and date, and line item by number and description.
- C. Stored materials will not be paid for unless invoices for the stored materials are attached to the Application for Payment.

1.06 SCHEDULE UPDATES

- A. Provide schedule updates with Application for Payment.
- B. Application for Payment will be rejected if schedule updates are not included as specified.

1.07 STORED MATERIALS

- A. Invoices must be submitted as a prerequisite for payment of stored materials. The invoice must contain the project title on the invoice.
- B. Release of Liens will be required the following month for materials submitted the previous month for payment as stored materials.
- C. Materials submitted must be stored on site unless an alternate location is approved by the Engineer and accepted by the Owner.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 29 76

SECTION 01 31 13

COORDINATION

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for coordination of Work.

1.02 COORDINATION, GENERAL

- A. Coordinate scheduling, submittals, and work of the various sections of Specifications so that the Work is done in an efficient and orderly manner.
- B. At each stage of the Work make provisions for later stages of the Work.

1.03 COORDINATION MEETINGS

- A. Conduct coordination meetings as specified in Section 01 31 19.23 Progress Meetings.
- B. Hold coordination meetings and pre-installation meetings with personnel and subcontractors to assure coordination of Work.

1.04 COORDINATION OF INSPECTIONS

- A. Coordinate all inspections required by the various agencies, Owner, and Engineer.
- B. Notify Engineer in writing not less than 48 hour notice prior to any inspection.

1.05 COORDINATION OF SUBMITTALS

- A. General: As specified in:
 - 1. General Provisions, Special Provisions, conditions of the Contract for construction; and
 - 2. Section 01 33 00 Submittals.
- B. Coordination of Submittals
 - 1. Schedule and coordinate submittals.
 - 2. Coordinate work of various Sections having interdependent responsibilities for installing equipment, connecting to equipment, and placing equipment in service.
 - 3. Coordinate requests for substitutions.
 - a. Verify that substitutions can be properly installed and operated in the space provided.
 - b. Make provisions for modifications required for the proper installation and operation of substitutes.
 - c. Verify compatibility of operating elements, and effect on work of other Sections.

1.06 UTILITIES

- A. Coordinate location, protection, and relocation of existing utilities as specified in Section 01 73 29 Cutting and Patching.
- B. Coordinate connection of sanitary sewer, potable water and storm drains to buildings.
 - 1. If any of this work depends upon work of other contractors, report to Engineer any defects in such other work that renders it unsuitable for proper execution and results.
 - 2. Failure to report any defects in other work shall constitute acceptance (at Contractor's risk) of other contractor's work as suitable for connection.

1.07 CUTTING, PATCHING, AND JOINING

- A. Cutting, patching, and joining shall meet the requirements of Section 01 73 29 Cutting and Patching.
- B. Coordinate cutting, patching, and joining of work of various trades.
- C. Execute cutting, patching, and joining required to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and non-conforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical work.

1.08 CONTRACT CLOSEOUT

- A. Contract closeout shall meet the requirements of Section 01 77 00 Contract Closeout.
- B. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion. Coordinate completion and cleanup of Work of prior to Final Completion.
- C. After Owner occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
- D. Assemble and coordinate closeout submittals specified in Section 01 77 00 Contract Closeout.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 31 13

SECTION 01 31 19.13

PRE-CONSTRUCTION CONFERENCES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for arrangements, participants, and agenda for preconstruction conferences.

1.02 PRECONSTRUCTION CONFERENCE

- A. Date and Time: Scheduled by Owner or Engineer after Notice of Award.
- B. Location: At location designated by Owner or Engineer.
- C. Attendance:
 - 1. Representatives of Owner;
 - 2. Engineer;
 - 3. Resident Project Representative;
 - 4. Contractor;
 - 5. Major subcontractors listed on proposal;
 - 6. Representatives of applicable regulatory authorities;
 - 7. Representatives of funding agency;
 - 8. Representatives of affected utilities.
- D. Purpose:
 - 1. Establish a working relationship;
 - 2. Identify responsible personnel;
 - 3. Discuss procedures;
 - 4. Discuss project coordination.
- E. Documents to be provided by Contractor:
 - 1. The following Schedules shall be submitted prior to the Preconstruction Conference:
 - a. Preliminary Schedule of Work;
 - b. Preliminary Submittal Schedule for Shop Drawings and Samples;
 - c. Schedule of Values.
 - 2. Hurricane Preparedness Plan shall be submitted within 30 days after receipt of Notice of Award. The Plan shall outline the necessary measures which the Contractor proposes to perform at no additional cost to the Owner in case of a hurricane warning.

F. Agenda:

1. Schedule of values, and progress schedule.
2. Designation of responsible personnel.
3. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal requests, change orders, and Contract close-out procedures.
4. Scheduling.
5. Work sequencing.
6. Utility coordination.
7. Other issues as required or requested by Owner, Contractor, regulatory authorities, funding agency, or affected utilities.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 31 19.13

SECTION 01 31 19.23
PROGRESS MEETINGS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes: Requirements and procedures for progress meetings.

1.02 REQUIREMENTS FOR MEETINGS

A. Scheduling

1. Progress Meetings: Schedule by Owner, Engineer, or Contractor as deemed necessary by any of the parties.
2. Special Meetings: Scheduled by Owner, Engineer, or Contractor as applicable to purpose of meeting.

B. Location of Meetings: Offices of Owner.

1.03 PROGRESS MEETINGS

A. Purpose:

1. Review progress of Work;
2. Review submittal status;
3. Facilitate coordination;
4. Discuss changes; and
5. Resolve problems which may develop.

B. Attendance:

1. Contractor;
2. Subcontractors as appropriate to agenda;
3. Suppliers as appropriate to agenda;
4. Owner;
5. Engineer;
6. Sub-consultants as appropriate to agenda; and
7. Representatives of regulatory authorities, funding agency, and affected utilities as appropriate to agenda.

C. Minimum Agenda

1. Review progress of Work.
2. Field observations, problems, and decisions.
3. Identification of problems which impede planned progress.
4. Review of submittals schedule and status of submittals.

5. Review of off-site fabrication and delivery schedules.
 6. Maintenance of progress schedule.
 7. Corrective measures to regain projected schedules.
 8. Planned progress during succeeding work period.
 9. Coordination of projected progress.
 10. Effect of proposed changes on progress schedule and coordination.
 11. Record drawing status.
 12. Other business relating to Work.
- D. Schedule: As required by Owner, Engineer, or Contractor.
- E. Minimum Notification: Four days in advance of meeting date.

1.04 SPECIAL MEETINGS

- A. Purpose: Avoid or resolve problems relative to scheduling, coordination, or both.
- B. Attendance:
1. Contractor;
 2. Subcontractors as appropriate to agenda;
 3. Suppliers as appropriate to agenda;
 4. Owner;
 5. Engineer;
 6. Subconsultants as appropriate to agenda; and
 7. Representatives of regulatory authorities, funding agency, and affected utilities as appropriate to agenda.
- C. Agenda: As applicable to issues to be discussed.
- D. Schedule: As required by Owner, Engineer, or Contractor.
- E. Minimum Notification: Four days in advance of meeting date.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 31 19.23

SECTION 01 32 16

PROGRESS SCHEDULES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of construction Progress Schedules and periodical updating.

1.02 SUBMITTALS

- A. General: as specified in:
 - 1. Section 01 33 00 Submittal Procedures; and
 - 2. This Section.
- B. Preliminary Schedule of Work: Submit Preliminary Schedule of Work (Estimated Progress Schedule) as specified in the General Conditions. Following Schedule Review Meeting, resubmit Preliminary Schedule of Work as specified in the General Conditions.
- C. Progress Schedules: Submit Progress Schedule with each Application for Payment. Identify changes since previous Progress Schedule submittal.

1.03 DISTRIBUTION

- A. Distribute copies of reviewed Schedules to job site file, subcontractors, suppliers, and other concerned entities.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in Schedules.

1.04 FORMAT

- A. Prepare Schedules as a horizontal bar chart or other format acceptable to the Engineer.
- B. Provide separate identification for each major portion of Work or operation, identifying first work day of each week.
 - A. Submit printed or plotted schedule. Paper size shall not exceed 18 x 24 inches.
 - B. Submit schedule in electronic *.pdf format.

1.05 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify work of separate stages and other logically grouped activities.
- C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

- D. Coordinate content with the Bid Schedule in the Contractor's Proposal for unit price contracts. Coordinate content with Section 01 29 73 Schedule of Values for lump sum contract.

1.06 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 32 16

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for submittals.

1.02 GENERAL

- A. Submittals shall meet the requirements of the General Conditions and Supplementary Conditions.

1.03 SCHEDULE

- A. Submit Preliminary Schedule of Shop Drawings and Samples prior to the Preconstruction Conference.
- B. Within 10 days after Preconstruction Conference, submit the revised Schedule of Shop Drawings (including product data).
- C. Transmit submittals in accordance with approved Progress Schedule, and in such sequence to avoid delay in the Work or work of other contracts.

1.04 TRANSMITTAL

- A. Transmit each item under Engineer-accepted transmittal form or letter.
- B. Identify Project by title and number.
- C. Number each transmittal.
- D. Deliver or forward electronic submittals to Engineer at ross.hackethal@tkwonline.com

1.05 CONTENTS

- A. Identify contents of submittal.
- B. State purpose of submittal.
- C. Identify variations from Contract Documents.
- D. Identify product or system characteristics which may effect performance of the completed Work.

1.07 RESUBMITTAL

- A. After Engineer review of submittal, revise and resubmit as required.
- B. Identify resubmittal as a resubmittal and reference previous submittal.
- C. Identify changes made since previous submittal.

1.08 DISTRIBUTION

- A. Distribute copies of reviewed submittals to concerned persons.
- B. Instruct recipients to promptly report any inability to comply with provisions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 33 00

SECTION 01 33 23

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for shop drawings, product data, and samples.

1.02 TRANSMITTAL OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures; and
 - 2. This Section.
- B. Identify:
 - 1. Project;
 - 2. Contractor;
 - 3. Subcontractor, as applicable to submittal;
 - 4. Major supplier, as applicable to submittal;
 - 5. Pertinent Drawing sheet and detail number;
 - 6. Specification Section number as appropriate; and
 - 7. Identify deviations from Contract Documents.
- B. Coordinate submittals into logical groupings to facilitate interrelation of the several items:
 - 1. Finishes which involve Engineer selection of colors, textures, or patterns.
 - 2. Associated items which require correlation for efficient function or for installation.

1.03 SHOP DRAWINGS AND PRODUCT DATA

- A. Shop Drawings, General
 - 1. Present in a clear and thorough manner. Title each drawing with Project name and number. Transmittal letter shall reference item as listed on Submittal Schedule. Identify each element of drawings by reference to sheet number and specification section of Contract Documents.
 - 2. Identify field dimensions; show relation to adjacent or critical features or Work or products.
 - 3. Provide space for Contractor and Engineer review stamps. Shop drawing submittals that do not include sufficient space for Contractor and Engineer review stamps will be returned for revision and resubmittal without review.

B Product Data, General

1. If product data submittals include manufacturers' brochures or other published data, all copies shall be as published. Do not submit machine copies of manufacturer's published data.
2. Submit only pages which are pertinent. Mark or highlight each copy of standard printed data to identify pertinent products. Show reference standards, performance characteristics, and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.
3. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.
4. Provide space for Contractor and Engineer review stamps. If there is not sufficient space on manufacturers' brochures or other published data for Contractor and Engineer review stamps, attach page, or sheet, for Contractor and Engineer review stamps. Include identification of brochure or other published data on attached page, or sheet. Product data submittals that do not include sufficient space for Contractor and Engineer review stamps will be returned for revision and resubmittal without review.

C. Shop Drawings and Product Data for Equipment

1. Include the following in each Shop Drawing and Product Data submittal:
 - a. Specification Section number;
 - b. Catalog data including the following:
 - 1) Specifications;
 - 2) Intended Service;
 - 3) Illustrations in sufficient detail to serve as a guide for assembly and disassembly;
 - 4) Parts schedule identifying materials to be used for various components and accessories;
 - c. Materials of construction;
 - d. Dimensions;
 - e. Coatings;
 - f. Additional information required to evaluate the proposed equipment's compliance with the Contract Documents.
 - g. Additional data specified in individual specification sections relating to equipment.

1.04 CONTRACTOR REVIEW

- A. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.
- B. Coordinate submittals with requirements of Work, Contract Documents, and Project Schedule.
- C. Sign each sheet of shop drawings and product data, and each sample label to certify compliance with requirements of Contract Documents. Notify Engineer in writing at time of submittal, of any deviations from requirements of Contract Documents.
- D. Do not fabricate products or begin work which requires submittals until return of submittal with Engineer acceptance.

1.05 ENGINEER REVIEW

- A. Engineer will review shop drawings, product data, and samples and return submittals within 21 calendar days of Engineer's receipt under normal circumstances.
- B. Engineer will notify Contractor if additional review time is required.

1.06 RESUBMITTALS

- A. Make resubmittals under procedures specified for initial submittals.
- B. Identify resubmittal as a resubmittal and reference previous submittal.
- C. Identify changes made since previous submittal.

1.07 DISTRIBUTION

- A. Distribute reproductions of shop drawings and copies of product data which bear Engineer's review stamp, to job site file, Record Documents file, subcontractors, suppliers, and other entities requiring information.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 33 23

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SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for obtaining permits and complying with permits
- B. Fees
 - 1. Contractor
 - a. Costs for permit fees and inspections required for permits obtained by the Contractor shall be paid by the Contractor.
 - b. Costs for inspection fees shall be included in the Bid. Costs for inspection fees shall be included in the applicable items in the Schedule of Values

1.02 PERMITS

- A. Contractor shall obtain Municipal, County, State and Federal permits not obtained by Owner, including but not limited to the following:
 - 1. Applicable Local Permits.
- B. Engineer will complete applications for the following permits:
 - 1. Sarasota Department of Health, Construct Public Water Systems Improvements - *If necessary*
 - 2. City of North Port Utilities and engineering approvals;
- C. Documents:
 - 1. Owner will furnish signed and sealed sets of Contract Documents for permit applications.
 - 2. Owner will furnish copies of permits.
 - 3. Contractor shall furnish copies of permits obtained by the Contractor. Forward copies of permits to the Engineer or Owner prior to commencement of work requiring permits.

1.03 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 - 3. This Section.
- B. Contractor shall submit electronic copies of any permits obtained by Contractor.

1.04 CODES

- A. Codes applicable to this project include, but are not necessarily limited to, the following:
 - 1. Florida Building Code.
 - 2. Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
 - 3. Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
 - 4. Accessibility Requirements Manual, Department of Community Affairs, Florida Board of Building Codes and Standards.
 - 5. NFPA 101 Life Safety Code.
 - 6. Standard Fire Prevention Code.
 - 7. State Fire Marshal's Uniform Fire Safety Rules.
- B. If there is a conflict in regulations, codes, or regulations and codes, the more stringent requirements shall govern.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 VERIFICATION AND CONFORMANCE

- A. Verify that all permits which Owner is required to obtain have been obtained. Copies of these permits will be made available to the Contractor.
- B. Obtain all permits Contractor is responsible for obtaining.
- C. Conform to all requirements of each permit.

3.02 PERMIT DISPLAY

- A. Display all permits obtained by Owner and by Contractor that are required to be displayed at the project site.
- B. Display each permit in conformance with the requirements of the regulatory authority that issued the permit.

END OF SECTION 01 41 00

SECTION 01 42 19

REFERENCE STANDARDS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes

1. Requirements relative to reference publications; and
2. Schedule of Standards Organizations.

1.02 REFERENCE PUBLICATIONS

- A. References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. Reporting and resolving discrepancies relative to reference publications shall be as specified in the General Conditions.
- C. Document precedence shall be as specified in the General Conditions.

1.03 SCHEDULE OF STANDARDS ORGANIZATIONS

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturer's Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGC	Associated General Contractors of America
AGMA	American Gear Manufacturer's Association
AHGDA	American Hot Dip Galvanizers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association

ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
APHA	American Public Health Association
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASMM	Architectural Sheet Metal Manual
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood-Preservers' Association
AWPI	American Wood Preservers Institute
AWWA	American Water Works Association
AWS	American Welding Society
BHMA	Builders Hardware Manufacturer's Association
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
EJCDC	Engineers' Joint Contract Documents Committee
EPA	Environmental Protection Agency
ETL	Electrical Test Laboratories
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FM	Factory Mutual
FS	Federal Specification General Services Administration Specification and Consumer Information Distribution Section (WFSIS)
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IMIAC	International Masonry Industry All-Weather Council

IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
MBMA	Metal Building Manufacturer's Association
MSS	Manufacturer's Standardization Society
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electric Code
NEMA	National Electrical Manufacturers' Association
NFRC	National Fenestration Rating Council
NFPA	National Fire Protection Association
NRCA	National Roofing Contractor's Association
NSF	NSF International
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PS	Product Standard
SBC	Standard Building Code
SDI	Steel Door Institute
SJI	Steel Joist Institute
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
UL	Underwriter's Laboratories, Inc.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 42 19

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SECTION 01 45 16.13

CONTRACTOR'S QUALITY CONTROL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for Contractor's quality control.

1.02 GENERAL QUALITY CONTROL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.03 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and rocking.

1.04 MANUFACTURERS' INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence.
- B. Request clarification from Engineer before proceeding if instructions conflict with Contract Documents.

1.05 MANUFACTURERS' CERTIFICATES

- A. Submit manufacturer's certificate that products meet or exceed specified requirements.

1.06 MANUFACTURERS' FIELD SERVICES (not used)

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 45 16.13

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SECTION 01 45 29

TESTING LABORATORY SERVICES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for testing laboratory services.
- B. Payment Procedures
 - 1. Contractor shall employ and pay for services of an independent testing laboratory to perform specified inspection and testing.
 - 2. Employment of testing laboratory by Contractor shall in no way relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.02 REFERENCES

- A. General: References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. ANSI/ASTM Standards
 - 1. ANSI/ASTM D3740 Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
 - 2. ANSI/ASTM E329 Practice for Inspection and Testing Agencies for Concrete, Steel, Bituminuous Materials as Used in Construction

1.03 SUBMITTALS

- A. General: As specified in:
 - 1. General Conditions;
 - 2. Section 01 33 00 Submittals;
 - 3. This Section.
- B. Prior to start of Work, submit testing laboratory name, address, and telephone number, name of responsible officer, and name of full time registered Engineer and/or specialist, as appropriate to testing services performed.
- C. Submit inspection reports and test reports.

1.04 LABORATORY QUALITY ASSURANCE

- A. Testing laboratory shall meet the requirements of ANSI/ASTM E329, ANSI/ASTM D3740, or ANSI/ASTM E329 and ANSI/ASTM D3740, as appropriate to laboratory services.
- B. Testing laboratory shall be authorized to operate in the State of Florida.
- C. Testing laboratory shall maintain a full-time registered Engineer and/or specialist, as appropriate to testing services performed, on staff to review services.
- D. Testing laboratory shall calibrate testing equipment at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards (NBS) Standards or accepted values of natural physical constants.

1.05 LABORATORY RESPONSIBILITIES

- A. Test samples of materials and mixes submitted by Contractor.
- B. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
- C. Perform specified inspection, sampling, and testing of products in accordance with specified standards.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
- F. Perform additional inspections and tests required by Engineer.
- G. Attend preconstruction conferences and progress meetings.

1.06 LABORATORY REPORTS

- A. After each inspection and test, promptly submit an electronic copy to the engineer, owner and contractor of laboratory report.
- B. Include:
 - 1. Date issued,
 - 2. Project title and number,
 - 3. Name of inspector,
 - 4. Date and time of sampling or inspection,
 - 5. Identification of product and Specifications section,
 - 6. Location in the Project,
 - 7. Type of inspection or test,
 - 8. Date of test,
 - 9. Results of tests,
 - 10. Conformance with Contract Documents.
- C. When requested by Engineer, provide interpretation of test results.

1.07 LIMITS ON TESTING LABORATORY AUTHORITY

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

1.08 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory, at designated location, adequate samples of proposed materials which require testing, along with proposed mix designs.
- B. Cooperate with laboratory personnel. Provide access to the Work. Provide access to manufacturer's facilities, if testing, or testing observation, within manufacturer's facility is required by the Contract Documents.
- C. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of Products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- D. Notify Engineer, NPU, and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
- E. Pay costs of testing laboratory services as specified in this Section.

1.09 SCHEDULE OF INSPECTIONS AND TESTS

- A. As specified in individual Sections or Reference Standards, as appropriate.

1.10 SAMPLE PICK-UP AND DELIVERY

- A. Samples of materials collected at Project site to be tested by laboratory shall be picked up at the Project site and delivered to the laboratory, at designated location, by Contractor's personnel or laboratory personnel, as appropriate to the agreement between the Contractor and the laboratory.
- B. Contractor shall make arrangements for adequate samples from off-site sources, which require laboratory testing, to be delivered to project site or to laboratory, at designated location, as appropriate to the agreement between the Contractor and the laboratory.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 45 29

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SECTION 01 51 00

TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for temporary utilities.

1.02 TEMPORARY SERVICES

- A. Each temporary service shall meet the requirements of the utility having authority over the temporary service. Provide metering and isolation to meet requirements of utility authority over temporary service.
- B. Obtain permission of utility having authority over temporary service prior to connecting temporary service.
- C. Remove temporary services after temporary services are no longer needed for construction operations, site security, field offices, or testing.

1.03 APPLICATION AND PAYMENT FOR TEMPORARY SERVICES

- A. Make applications and arrangements and pay fees and charges for the following temporary services:
 - 1. Electrical service for the following:
 - a. Power for construction tools.
 - 2. Potable water service for the following:
 - a. Construction operations.
 - b. Consumption by Contractor's and subcontractors' personnel.
 - 3. Sanitary service for Contractor's and subcontractors' personnel.
 - 4. Telephone service for the following:
 - a. Communications regarding construction operations.
 - b. Emergency services.
- B. Provide and pay for temporary generators, pumps, wiring, switches, piping, connections, meters, and appurtenances for temporary utilities.

1.04 WATER

- A. Provide temporary water services for the following:
 - 1. Potable water, non-potable water, or both for construction operations.
 - 2. Potable water for consumption by Contractor's and subcontractors' personnel.
 - 3. Potable water for field offices.

- B. Source of potable water shall be as follows:
 - 1. Public utility providing potable water to the project site;
 - 2. Potable water hauled to site in drinking water dispensers;
 - 3. Bottled water.
- C. Piping for Temporary Water Services
 - 1. Provide pipe, fittings, valves, and hydrants for temporary water service, or services.
 - 2. Provide temporary pumps, storage tanks, and controls if available water volume, pressure, or volume and pressure are not sufficient for construction operations.
 - 3. Extend branch piping with outlets located so that water is available by use of hoses.
 - 4. Securely anchor and support temporary water piping.
 - 5. Provide warning signs at each temporary non-potable water outlet.

1.05 SANITARY FACILITIES

- A. Provide temporary sanitary facilities for Contractor's and subcontractors' personnel.
- B. Sanitary Facilities for Contractor's and Subcontractors' Personnel
 - 1. Provide fixed toilets or portable chemical toilets for Contractor's and subcontractors' personnel.
 - 2. Sanitary Facilities for Contractor's and Subcontractors' Personnel shall meet the requirements of OSHA Safety and Health Standards for Construction.
 - 3. Seclude sanitary facilities from public observation as follows:
 - a. Locate sanitary facilities so that sanitary facilities cannot be observed by public, or
 - b. Provide screening around sanitary facilities so that sanitary facilities cannot be observed by public.
 - 4. Maintain sanitary facilities so that sanitary facilities are clean and dry at all times.
 - 5. Enforce use of sanitary facilities. Do not commit nuisances on the project site.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 51 00

SECTION 01 55 26

TRAFFIC REGULATION

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Traffic regulation for construction area.
2. Traffic regulation for haul routes and access routes.

1.02 TRAFFIC CONTROL STANDARDS

- A. All design, application, installation, maintenance and removal of all traffic control devices and all warning devices and barriers which are necessary to protect the public and workmen from hazards within the project limits shall be as specified in the State of Florida, Manual of Traffic and Highway Construction, Maintenance and Utility Operations. And, applicable sections of the National “Manual of Uniform Traffic Control Devices” (MUTCD) established by the Federal Highway Administration.
- B. Standards established in the aforementioned Manual constitute the minimum requirements for normal conditions. Additional traffic control devices, warning devices, barriers, or other safety devices shall be required where unusual, complex or particularly hazardous conditions exist.

1.03 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking to prevent interference with the following:

1. Public traffic and parking.
2. Access by emergency vehicles.
3. Owner's operations.

B. Monitor parking of construction personnel's vehicles.

C. Prevent parking on or adjacent to roads within the project area.

1.04 CONSTRUCTION ACCESS AND HAUL ROUTES

- A. Public streets that permit truck traffic and connect to the project site may be used for access by construction traffic.
- B. Do not allow construction traffic on streets where truck traffic is prohibited by existing signs.

1.05 MAINTENANCE OF CONSTRUCTION ACCESS AND HAUL ROUTES

- A. Clean haul vehicles prior to leaving job site if required to prevent dirt from being deposited on either access routes or haul routes.
- B. Immediately remove dirt, debris, or dirt and debris deposited or spilled on access routes, haul routes, or access and haul routes.

- C. Repair or replace pavement damaged by construction operations or movement of construction equipment or material.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 55 26

SECTION 01 61 00

BASIC PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for products.

1.02 DEFINITIONS

- A. Products: Products include material, equipment, systems, fabrications, and mixes.
- B. Size: Pipe, fittings, and valve sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.03 QUALITY ASSURANCE

- A. Specification Section: Products shall meet the requirements of individual Sections in these Specifications.
- B. Reference Standards: Products shall comply with referenced standards as minimum requirements.
- C. Products Supplied in Quantity: Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.

1.04 WARRANTIES

- A. Submit manufacturers' warranties as published in manufacturers' literature and specified to be provided in individual Sections.

PART 2 – PRODUCTS

2.01 PRODUCTS, GENERAL

- A. All manufactured and fabricated products shall be new and unused unless otherwise noted on the Drawings or specified.

PART 3 – EXECUTION (not used)

END OF SECTION 01 61 00

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SECTION 01 62 00

PRODUCT OPTIONS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for options in selecting products.

1.02 PRODUCT OPTIONS

- A. For products specified by reference standards or by descriptions only, any product meeting those standards can be submitted for approval.
- B. For products specified by naming one or more manufacturers with a provision for substitutions, by stating "or equal", "or approved equal" or similar words, submit a request for substitution for any equal product from manufacturer not specifically named.
- C. For products specified by naming one or more manufacturers without a provision for substitutions and without a statement that no substitution is permitted, submit a request for substitution for any equal product from manufacturer not specifically named.
- D. For products specified by naming one or more manufacturers and a statement that no substitution is permitted, furnish products named and do not submit a request for substitution.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 62 00

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SECTION 01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for product delivery.

1.02 DELIVERY

- A. Contractor shall be responsible for delivery of products.

1.03 PROJECT/SITE CONDITIONS

- A. Regulatory Requirement: Comply with requirements of Federal, State, and local authorities regulating shipment of products.
- B. Environmental Requirements
 - 1. Do not load or unload products when weather could result in damage to product or create hazardous conditions for personnel loading or unloading products.
 - 2. Load or unload products within enclosed buildings if required to prevent damage to products.

PART 2 – PRODUCTS

2.01 PRODUCTS, GENERAL

- A. Products shall be as specified in Section applicable to products.

PART 3 – EXECUTION

3.01 PACKING

- A. Products shall be boxed, crated, or otherwise protected from damage and moisture during shipment. Products shall be protected from exposure to corrosive fumes and shall be kept thoroughly dry during shipment.
- B. Meet requirements for packing equipment specified in individual Sections covering products.

3.02 SHIPPING

- A. Contractor shall promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

3.03 UNLOADING

- A. Contractor shall unload products. Contractor shall provide personnel and equipment as required to unload products.
- B. Do not unload damaged products. Promptly remove damaged products from the job site. Replace damaged products with undamaged products.
- C. Unload equipment and appurtenances by hoists or skidding. Unload fabricated assemblies and other products too large or bulky for manual handling by hoists or skidding Do not drop products. Do not skid or roll products on or against other products. Pad slings and hooks in a manner which prevents damage to products.

END OF SECTION 01 65 00

SECTION 01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for product storage and handling

1.02 PRODUCT STORAGE, AND HANDLING

- A. Contractor shall be responsible for the storage and handling of products.

1.03 PROJECT/SITE CONDITIONS

- A. Regulatory Requirements: Comply with requirements of Federal, State, and local authorities regulating storage facilities.
- B. Environmental Requirements
 - 1. Provide covered, enclosed, or covered and enclosed storage facilities for products that can be damaged or deteriorated by exposure to sunlight, rainfall, or other conditions.
 - 2. Provide climate controlled storage facilities for products that can be damaged by heat, humidity, condensation, or other conditions that could occur in a non-climate controlled environment.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 GENERAL

- A. Meet requirements for storage and handling specified in individual Sections covering products.
- B. Promptly remove damaged products from the job site. Replace damaged products with undamaged products.

3.02 PRODUCT HANDLING

- A. Handle equipment and appurtenances by hoists or skidding. Pad slings and hooks in a manner which prevents damage to products.
- B. Do not drop products.
- C. Do not skid or roll products on or against other products.

3.03 PRODUCT STORAGE

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions. Store products which will be deteriorated by sunlight in a cool location out of direct sunlight. Rubber products shall not come in contact with petroleum products.
- C. Place fabricated products, stored out-of-doors, on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering and as recommended by manufacturer; provide ventilation which avoids condensation.
- D. Store equipment having moving parts, such as gears, bearings, and electric motors, in a temperature and humidity controlled area until equipment is installed and permanent HVAC systems are in operation. Store instruments, control panels, motor control centers, and switchgear in a temperature and humidity controlled area until instruments, control panels, motor control centers, and switchgear are installed and permanent HVAC systems are in operation.
- E. Stored electric motors with space heaters shall have the space heaters energized unless the motors are stored in a temperature and humidity controlled area. When electric motors with space heaters are installed, the space heaters shall be connected and energized. Space heaters shall remain energized until equipment is accepted and placed in service.
- F. Arrange storage to provide access for inspection. Periodically inspect stored products to assure products are undamaged, and are maintained under required conditions.

END OF SECTION 01 66 00

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements and procedures for cutting and patching.

1.02 SYSTEM DESCRIPTION

- A. Perform cutting and patching required to complete work shown and specified.
- B. Perform cutting and patching as shown on the Drawings and specified in this Section.

1.03 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 - 3. This Section.
- B. Submit the following:
 - 1. Written request for authorization to perform cutting or alteration.
 - a. Submit written request in advance of cutting, restoration, or alteration which affects:
 - 1) Structural integrity of any element of Project.
 - 2) Integrity of weather-exposed or moisture-resistant element.
 - 3) Efficiency, maintenance, or safety of any operational element.
 - 4) Visual qualities of sight-exposed elements.
 - 5) Work of Owner or separate contractor.
 - b. Include in request:
 - 1) Identification of Project.
 - 2) Location and description of affected work.
 - 3) Necessity for cutting, restoration, or alteration.
 - 4) Description of proposed work, and products to be used.
 - 5) Alternatives to cutting, restoration, or alteration.
 - 6) Effect on work of Owner or separate contractor.
 - 7) Written permission of affected separate contractor.
 - 8) Date and time work will be executed.

2. Shop drawings for fabricated items to be used in alterations and restoration.
3. Product data for items and materials to be used in alterations and restoration.
4. Request for substitution as specified in Section 01 25 00 Product Substitution Procedures.

1.04 EXISTING UTILITIES AND IMPROVEMENTS

A. General

1. Protect existing utilities and improvements as specified in the General Conditions.
2. Protect existing utilities and improvements which are not shown to be removed or relocated.

B. Owner's Utilities, Process Piping, and Improvements

1. General

- a. Do not interrupt service of Owner's existing utilities, process piping, or other improvements without notification and approval of Engineer.

2. Repair of Owner's Utilities, Process Piping, and Improvements

- a. If Owner's utilities, process piping, or other improvements are interrupted or damaged without notification and approval, immediately notify Engineer and Owner.
- b. Unscheduled service interruption, property damage, or service interruption and property damage shall be corrected, repaired, or corrected and repaired as follows:
 - 1) Contractor shall take immediate actions to shut off flows, shut off pumps, shut off equipment, and contain spills as applicable to the event.
 - 2) Engineer or Owner shall direct Contractor to make repairs, assist Owner in making repairs, or provide access to event site for Owner to make repairs.
- c. Repair work by Contractor shall meet the requirements of the Owner.
- d. Repairs and fines related to unscheduled interruptions, damage, or unscheduled interruption and damage shall be paid by the Contractor with no additional cost to the Owner.

PART 2 – PRODUCTS

2.01 PRODUCTS FOR CUTTING AND PATCHING

- A. Type and Quality of Existing Products: Determine by inspecting and testing existing products where necessary, referring to existing work as a standard.
- B. Products for Restoration: Products identical to, or equal to, products used in existing work when new.
- C. Products for Alterations: As specified in individual specification Sections applicable to products.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions, including elements subject to damage or movement during alteration, restoration, or alteration and restoration.
- B. Remove debris and abandoned items from areas of alteration and renovation work and from concealed spaces.
- C. Verify that demolition is complete.
- D. Verify that areas are ready for installation of new work.
- E. Beginning of restoration work or alteration work means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide supports to assure structural integrity of surroundings.
- B. Close openings in exterior surfaces so that existing work [and salvage items] are protected from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.
- C. Remove and cut work so that damage is minimized. Remove and cut work to provide a means of restoring products and finishes as follows:
 - 1. If products, finishes, or products and finishes are specified, restore work to specified condition.
 - 2. If products, finishes, or products and finishes are not specified, restore work to original condition.

3.03 CUTTING PIPE AND CONDUIT

- A. Where new piping is to be connected to existing piping, cut existing piping square. Properly prepare ends of pipe for connection indicated on the drawings. Repair damage to lining and coating of existing piping resulting from cutting.

END OF SECTION 01 73 29

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SECTION 01 74 00

CONSTRUCTION CLEANING

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Requirements for cleaning project area.
2. Requirements for disposal of waste materials, debris, and rubbish during construction.

1.02 PROJECT SITE AND FACILITIES CLEANING

- A. The Contractor shall be fully responsible for cleaning each work area within the project site, from the start of work in the area, until improvements in the area have been completed and accepted by the Owner.
- B. The Contractor shall be fully responsible for cleaning each material and equipment storage area, from initial use of the area for material, equipment, or material and equipment storage, until all material and equipment have been removed from the area and restoration of the area has been completed and accepted by the Owner.
- C. The Contractor shall be fully responsible for cleaning each construction staging area, from initial use of the area for construction staging, until all of the Contractor's, trailers, equipment, and vehicles have been removed from the area and restoration of the area has been completed and accepted by the Owner.
- D. The Contractor shall be fully responsible for cleaning all Contractor's trailers, equipment, vehicles, tools, and other Contractor owned items, from initial placement until final removal from the project site.

1.03 CLEANING OF NEW WORK

- A. The Contractor shall be fully responsible for cleaning related to new Work including, but not necessarily limited to, the following:
 1. Cleaning of cured, or partially cured, concrete surfaces prior to placement of additional concrete.
 2. Cleaning of joint surfaces prior to making joints.
 3. Cleaning of surfaces prior to application of finish.
 4. Cleaning of equipment and enclosures prior to substantial completion.
 5. Cleaning of piping prior to substantial completion.
- B. Cleaning relative to new Work shall be as specified in individual Specifications Sections.

PART 2 – PRODUCTS

2.01 EQUIPMENT

- A. Provide covered containers for deposit of waste materials, debris, and rubbish.

PART 3 – EXECUTION

3.01 CLEANING

- A. Maintain areas under Contractor's control free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases.
- C. Periodically clean interior areas to provide suitable conditions for work.
- D. Broom clean interior areas prior to start of surface finishing, and continue cleaning on an as-needed basis.
- E. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.

3.02 DISPOSAL

- A. Remove waste materials, debris, and rubbish from project area daily.
- B. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.
- C. Remove temporary waste disposal containers prior to project completion.

3.03 REPAIR AND RESTORATION

- A. Clean and repair damage caused by installation or use of temporary facilities.
- B. Restore existing facilities used during construction to condition prior to construction.

END OF SECTION 01 74 00

SECTION 01 77 00

CONTRACT CLOSEOUT

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for contract closeout.

1.02 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Provisions, Special Provisions, and conditions of the Contract for construction for Final Completion procedures.
- B. Complete all Work, including all items on the tentative list of items to be completed, issued with the Certificate of Substantial Completion.
- C. When Contractor considers work has reached final completion, submit written certification that Contract Documents have been reviewed, work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- D. In addition to submittals required by the conditions of the Contract, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- E. Engineer will issue a final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order.

1.03 FINAL CLEANING

- A. Complete final cleaning prior to final inspection.
- B. Clean site, sweep paved areas, rake clean other surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site prior to submitting Application for Final Payment.

1.04 PROJECT RECORD DOCUMENTS

- A. Store documents separate from those used for construction.
- B. Keep documents current; do not permanently conceal any work until required information has been recorded.
- C. At Contract closeout, submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.
- D. Do not submit Application for Final Payment prior to receiving Engineer's acceptance of project record documents.

1.05 WARRANTIES AND BONDS

- A. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble Warranties and Bonds executed by subcontractors, suppliers, and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
- B. Submit Warranties and Bonds prior to submitting Application for Final Payment. For equipment put into use with Owner's permission during construction, submit appropriate Warranty, Bond, or both, within 30 days after first operation. For items of Work delayed materially beyond Date of Substantial Completion, provide appropriate updated Warranty, Bond, or both, within ten days after acceptance, listing date of acceptance as start of warranty period.

1.06 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of Work.
- B. Deliver products, spare parts, and maintenance materials to Owner and obtain receipt prior to submitting Application for Final Payment.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION 01 77 00

SECTION 33 36 13.03

PIPE, FITTINGS, VALVES, PIPING SPECIALTIES, AND ACCESSORIES - GENERAL

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for pipe, fittings, valves, piping specialties, and accessories.

1.02 DEFINITIONS

- A. Exposed Pipe, Fittings, Valves, and Piping Specialties: Pipe, fittings, valves, and piping specialties that are not buried. Exposed pipe, fittings, valves, and piping specialties includes the following:
 - 1. Pipe, fittings, valves, and piping specialties outdoors aboveground;
 - 2. Pipe, fittings, valves, and piping specialties in buildings;
 - 3. Pipe, fittings, valves, and piping specialties on the interior of tanks;
 - 4. Pipe, fittings, valves, and piping specialties on the interior of vaults; and
 - 5. Pipe, fittings, valves, and piping specialties on the interior of pits.
- B. Piping Size References: Pipe, fitting, and valve, sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.03 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 - 3. This Section.
- B. Product Data: Submit product data as specified in individual specification sections appropriate to potable water pipe and fittings, valves, piping specialties, and accessories.

PART 2 – PRODUCTS

2.01 PIPE, FITTINGS, VALVES, PIPING SPECIALTIES, AND ACCESSORIES - GENERAL

- A. All pipe, fittings, valves, piping specialties, and accessories shall be new and unused.
- B. Potable transmission pipe, fittings, valves, and piping specialties shall be as shown on the Drawings and as specified in the individual specification Section applicable to the product furnished.

2.02 OPERATORS AND ACTUATORS FOR UTILITY VALVES - GENERAL

A. Operators for Exposed Piping Valves

1. Provide exposed valves with valve operators, levers, handwheels, chainwheels and chains, extension stems, bonnet extensions, floor stands, or other accessories as shown, specified, or shown and specified.
2. Manual operators for exposed valves shall have levers, handwheels, or chainwheels and chains, unless otherwise shown.
 - a. Effort required to operate valve lever shall not exceed 40 pounds applied at the extreme grip position of the lever.
 - b. Effort required to operate valve handwheel shall not exceed 40 pounds applied at the extremity of the wheel.
 - 1) Handwheels on valves 14-inch and smaller shall not be less than 8 inches in diameter.
 - 2) Handwheels on valves larger than 14-inch shall not be less than 12 inches in diameter.
3. Operators shall have open direction clearly and permanently marked. Exposed operators shall have position indicators.
4. Valve operators shall be provided by the valve manufacturer. Valves and operators of a given type shall be furnished by the same manufacturer. Valve operators shall be installed, adjusted, and tested by the valve manufacturer at the valve manufacturer's plant.
5. Operators, unless otherwise specified, shall turn counter-clockwise to open.

PART 3 – EXECUTION (not used)

END OF SECTION 33 36 13.03

SECTION 33 36 13.04

PIPING INSTALLATION - GENERAL

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: General requirements for installation of pipe, fittings, valves, piping specialties, and appurtenances.

1.02 QUALITY ASSURANCE

- A. Field Tests: Perform hydrostatic tests on installed piping as specified in Section 33 36 13.06 Piping Testing.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Pipe, fittings, valves, piping specialties, and appurtenances installed as part of Work shall be new and unused, unless otherwise shown or specified.
- B. New pipe, fittings, valves, piping specialties, and appurtenances installed as part of Work shall be as specified in other Sections, as appropriate.

PART 3 – EXECUTION

3.01 PIPING INSTALLATION - GENERAL

- A. Provide and use proper implements, tools and facilities required for the safe and convenient prosecution of the work. Provide and use implements, tools and facilities satisfactory to the Engineer.
- B. Install piping to lines, grades, elevations, or lines, grades and elevations shown on Drawings.
 - 1. Wherever possible, install exposed pipe parallel to walls and floors.
 - 2. Make changes in directions or elevations with fittings, by deflecting pipe joints, or with fittings and deflecting pipe joints. Do not exceed deflections specified in the appropriate pipe and fitting material Section or recommended by the joint manufacturer, whichever is more stringent.
- C. Do not lay pipe in water or when trench or weather conditions are unsuitable for proper installation.
- D. For piping systems, such as transmission mains, in which the flow through pipe is in one direction, install pipe bells on upstream end of pipe.
- E. Clean pipe, fittings, valves, and piping appurtenances before installation. Do not place debris, tools, clothing, lumber, or other materials in pipe during installation. Keep pipe,

fittings, valves, piping specialties, and appurtenances clean until accepted in completed Work.

- F. Do not damage pipe, fittings, valves, piping specialties, and appurtenances, including linings, coatings and encasement, during installation.
 - 1. Remove and replace damaged pipe, fittings, valves, piping specialties, and appurtenances.
 - 2. Remove damaged products from job site.
 - 3. Remove and replace damaged products at no additional cost to Owner.
- G. Properly protect installed piping at all times.
 - 1. Whenever pipe installation laying is interrupted, including lunch time and break time, protect the open ends of all pipes against entrance of animals, children, earth, or debris by bulkheads or stoppers.
 - 2. Secure installed piping so that piping is not dislodged.
 - 3. Remove any earth, debris, or other material that gets into piping.

3.02 INSPECTION

- A. Inspect pipe, fittings, valves, piping specialties, and appurtenances prior to installation.
- B. Reject and promptly remove pipe, fittings, valves, piping specialties, and appurtenances that do not meet the Specifications. Remove rejected products from the job site.

3.03 PLACING PIPING PRODUCTS INTO TRENCH

- A. Carefully lower pipes, fittings, valves, and piping specialties into trench piece-by-piece by means of a derrick, ropes or other suitable tools or equipment. Carefully lower and place pipes, fittings, valves, and piping specialties so that products, product coatings, and product linings are not damaged.
- B. Lower each length of pipe separately. Lower each fitting, and valve separately. Fittings may be assembled before being lowered into trench if fitting joints are fully restrained while fitting assembly is lowered into trench.
- C. Do not drop or dump pipes, fittings, valves, or piping specialties into trench.

3.04 INSTALLING VALVES, GENERAL

- A. Clean interiors of valves of foreign matter before installation. Tighten stuffing boxes. Inspect valves in opened and closed positions to insure parts are in working condition.
- B. Verify operator orientation with Engineer prior to valve installation. If valve orientation is not verified with Engineer prior to valve installation, changes to orientation shall be made at no additional cost to the Owner.
- C. Install valves so that valves can be operated as intended.
 - 1. Install exposed valves with easy access for operation, removal, and maintenance.
- D. Install valves so that there are no conflicts between valve operators and equipment, structural members, railing, or other piping.
- E. Support exposed valves so that there is no undue stress on connecting pipe or fittings.

- F. Install valves, sensors, switches, and controls so that all system components are compatible and operate properly.

3.05 JOINING PIPE, FITTINGS, AND VALVES, GENERAL

- A. Assemble joints in accordance with recommendations of manufacturer of each particular type of joint and as specified in individual piping material Sections.
- B. Joint work shall be done by experienced workmen.
- C. Clean joints before assembling pipe, fittings, and valves.

3.06 INSTALLING ADAPTERS, SLEEVES, SADDLES, UNIONS, AND OTHER PIPING SPECIALTIES

A. General

1. Install couplings, adapters, sleeves, saddles, unions, and other piping specialties, in piping as indicated on the Drawings.
2. Install piping specialties in accordance with the manufacturer's written instructions and as specified in this Section.

B. Equipment Connections, General

1. Attach piping to pumps and other equipment in accordance with respective manufacturers' recommendations.
2. Use flexible connectors where required to prevent excess load, vibration, or load and vibration on pumps and other equipment.

- C. Unions: Locate and install unions for piping assembled with threaded, solvent-cement, welded, or solder joints, so that piping can be disassembled and disconnected from pumps and equipment without cutting pipe.

3.07 CONNECTING TO EXISTING PIPE

A. General

1. Locate existing pipe horizontally and vertically and verify exact size of existing pipe.
2. Locate existing pipe sufficiently in advance of making connections to allow ample time for making changes in connection location and size.

B. Dry Connections

1. Make each dry connection with fittings and valves indicated on Drawings.
2. Provide sleeves, adapters, or sleeves and adapters required to complete connections.
3. Required pipe, fittings, valves, tools, and equipment shall be at connection site prior to starting connection.
4. Make connections at night and on weekends when existing piping can only be removed from service during minimum flow periods.
5. Owner will operate existing valves.

6. Install sufficient pipe, restrained joints, thrust blocking, or pipe, restrained joints and thrust blocking so that existing pipe can be put in service immediately after connection is completed.
7. Inspect joints and eliminate leaks immediately after connection is completed and existing pipe is put in service.
8. Install watertight plugs on open ends of pipe and valves and backfill excavation if new piping is not connected to dry connection within 48 hours after completing dry connection.

3.8 CONNECTING PIPE TO WALL PIPE AND WALL SLEEVES

A. Wall Pipe

1. Align pipe connecting to wall pipe so that pipe is centered on wall pipe joint.
2. Align pipe connecting to mechanical joint wall pipe so that wall pipe joint deflection meets the requirements specified in Section 33 36 23.24 AWWA C900 and C905 PVC Pipe and Fittings.
3. Align pipe connecting to push-on joint wall pipe so that wall pipe joint deflection meets the requirements specified in Section 33 36 23.24 AWWA C900 and C905 PVC Pipe and Fittings.
4. Align exposed pipe connecting to flange joint wall pipe so that there is no joint deflection.

B. Wall Sleeves

1. Align pipe passing through wall sleeve so that pipe is centered in wall sleeve.
2. Align pipe passing through wall sleeve so that pipe is parallel to wall sleeve.

C. Restraint for Valves, Couplings, Adapters, and Other Piping Appurtenances

1. General

- a. Restrain valves, couplings, adapters, and other piping appurtenances located near changes in direction and within distances specified in Thrust Restraint for Buried Pipe Table 1 through Table 4 at end of this Section.
- b. Restrain valves so that unbalanced force developed during opening and closing of valves are supported independent of the piping system.

2. Sleeve Type Couplings and Flange Adapters

- a. Restrain sleeve type couplings with harness of tie rods that span across coupling between restrained pipe or fitting joints.
- b. Tie rods and nuts shall be AISI Type 316 stainless steel.

D. Pipe Anchors: Pipe anchors will not be accepted in lieu of restrained joints.

- E. Restraint at Tapped Connections to Existing Pipe and at Tees Cut Into Existing Pipe
 - 1. Use concrete thrust blocks at tapped connections to existing piping and at tees cut into existing piping.
 - 2. Thrust blocks at tapped connections to existing piping and at tees cut into existing piping shall be as shown on the Drawings.

3.9 FLUSHING AND CLEANING INTERIOR OF PIPING

- A. Flush and clean piping as specified in Section 33 36 13.05 Piping Flushing and Cleaning.

3.10 HYDROSTATIC TEST

- A. Test piping as specified in Section 33 36 13.06 Piping Testing.

3.11 MANUFACTURER'S REPRESENTATIVE

- A. Provide assistance of manufacturers' representatives as follows:
 - 1. Check piping installation to verify installation procedures comply with manufacturer's recommendations.
 - 2. Advise Contractor on proper installation of piping, joints, supports, and special connections.
- B. Provide services of manufacturers' representative at no additional cost to Owner.

END OF SECTION 33 11 13.04

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SECTION 33 36 13.05

PIPING FLUSHING AND CLEANING

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for flushing and cleaning utility piping.
- B. Payment Procedures
 - 1. Flushing Water
 - a. Contractor shall pay Utility providing water for flushing of utility piping systems.
 - b. Payment for water shall be at rate established by Utility.
 - c. Provide flushing water at no additional cost to Owner.
 - 2. Flushing Operations: Contractor shall provide materials, equipment, labor, and services required to clean and flush water main pipeline, furnished and installed as a part of Work, as specified in this Section at no additional cost to the Owner.

1.02 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures; and
 - 2. This Section
- B. Submit copy of permit for flushing water disposal prior to starting piping system installation.
- C. Submit calibration record for flushing and cleaning water supply meter.

1.03 PROJECT/SITE CONDITIONS

- A. Regulatory Requirements for Disposal of Flushing Water
 - 1. Obtain permit from appropriate Florida Water Management District prior to starting piping system installation. Make application and arrangements and pay fees and charges for disposal of discharge from flushing.
 - 2. Submit copy of permit for flushing water disposal.
 - 3. Comply with requirements of permit for flushing water disposal. Meet regulatory requirements relative to disposal of discharge water from flushing.

PART 2 – PRODUCTS

2.01 FLUSHING AND CLEANING EQUIPMENT AND PIPING

- A. Contractor shall be responsible for the sizing and selection of flushing and cleaning systems, equipment, piping, and appurtenances.

PART 3 – EXECUTION

3.01 PIPING FLUSHING AND CLEANING

A. General

1. Flush and clean piping systems, 8-inch and smaller.
2. Pig or swab interior of piping systems, 10-inch and larger. Cleaning of 10-inch water main pipeline may be performed by flushing and cleaning (instead of pigging), if approved by the Engineer.

B. Preparation for Flushing and Cleaning

1. Furnish and install taps, connections, pipe, fittings, valves, pumps, and tanks required to flush and clean piping. Taps, connections, pipe, fittings, valves, pumps, and tanks shall be of proper size to provide flushing velocity specified in this Section.
2. Furnish and install connections, pipe, fittings, and valves for launching and catching pig, for piping cleaned by pigging.
3. Provide backflow preventer in flushing water connection to potable water system. Backflow preventer shall be approved by regulatory authority having jurisdiction.
4. Furnish and install meter to record volume of water used for flushing and cleaning. Use meter approved by the Engineer. Meter shall have been calibrated by independent laboratory, or other facility acceptable to the Engineer, with one year of installation date for flushing and cleaning. Submit calibration record for meter.

C. Flushing and Cleaning Interior of Piping

1. General

- a. Flush, clean, or flush and clean interior of piping, unless otherwise approved by the Engineer as provided in this Section.
 - 1) If piping systems are kept free of dirt, debris, small tools, and other objects during installation, and cleanliness of piping can be verified by the Engineer by direct observation, television inspection, or other means approved by the Engineer, the requirement for cleaning by flushing, pigging, or swabbing may be waived by the Engineer.
 - 2) Piping systems that are partially or fully submerged at anytime during installation shall be cleaned by flushing, pigging, or swabbing, as specified in this Section.

- b. Coordinate flushing time and duration with Owner. Coordinate flushing duration and time for each piping section prior to flushing.
 - c. Flushing water supply shall meet the following requirements:
 - 1) Flushing water for piping shall be reclaimed water or potable water.
 - 2) Flushing water supply capacity shall be sufficient to provide a sustained velocity of 4 feet per second in the piping to be flushed;
 - 3) Flushing shall not reduce water supply system pressure below 20 psi; and
 - 4) Flushing shall not adversely impact any customer connected to flushing water supply system.
 - d. Flush piping until discharged flushing water is clear. Flushing volume shall not be less than the one total volume of piping being flushed. If discharged flushing water is not clear after being flushed with one total volume of piping being flushed, continue flushing until discharged flushing water is clear.
2. Flushing and Cleaning Interior of Piping, 8-inch and Smaller
- a. Minimum Flushing Velocity for 8-inch and Smaller Piping: 4 feet per second.
 - b. Minimum Flow Rate for Flushing 8-inch and Smaller Piping
 - 1) Minimum Flow Rates for Flushing Piping are as follows:

<u>Pipe Size</u>	<u>Minimum Flow Rate</u>
1/4-inch	1 gpm
1/2-inch	3 gpm
3/4-inch	6 gpm
1-inch	9 gpm
1¼-inch	16 gpm
1½-inch	22 gpm
2-inch	37 gpm
2½-inch	53 gpm
3-inch	83 gpm
4-inch	180 gpm
6-inch	400 gpm
8-inch	720 gpm
10-inch	1,100 gpm
12-inch	1,600 gpm
14-inch	2,200 gpm
16-inch	2,800 gpm

- 2) The Owner does not guarantee that the specified minimum flushing rates can be obtained from existing reclaimed water or potable water piping

systems. If Contractor elects to clean new piping by flushing, Contractor shall provide pumps, tanks, and piping required to produce specified flushing velocity at no additional cost to the Owner.

3. Flushing and Cleaning Interior of Piping Systems, 10-inch and Larger
 - a. Pig or swab interior of piping, 10-inch and larger, unless otherwise approved by Engineer and Owner, or Engineer, Owner, and utility providing flushing water, as appropriate.
 - b. Flushing of piping systems, 10-inch and larger, will only be considered if flushing water supply meets requirements specified in this Section and disposal or flushing water meets requirements specified in this Section.

D. Disposal of Flushing Water

1. Discharge water from flushing to storm drain systems in accordance with permit for disposal of flushing water and as specified in this Section. Provide silting basins and other discharge treatment systems in accordance with permit for flushing water disposal and to meet discharge permit requirements.
2. Do not allow discharge from flushing to puddle or pond on construction site except in areas designated and approved to receive flushing water.
3. Do not allow discharge from flushing to flow off construction site except through permitted discharge structures and through pipes, conduits, and channels that have been designated and approved for discharge flow from flushing.
4. Do not use sanitary sewers for disposal of flushing water.
5. Do not discharge flushing water containing settleable solids into storm sewers.
6. Do not contaminate or disturb the environment of properties adjacent to the Work.
7. Do not contaminate streams, canals, or other surface waters.
8. Provide temporary facilities and controls for flushing water discharge. Temporary facilities and controls shall be appropriate to the project, including, but not limited to:
 - a. Silting basin, or basins, of adequate size.
 - b. Filters.
 - c. Coagulants.
 - d. Screens.
9. Discharge onto pavement shall not damage pavement.

3.02 CONNECTION OF NEW PIPING SYSTEM TO EXISTING PIPING SYSTEM

- A. Do not complete connection of new piping system to existing piping system until Engineer has approved connection of new piping system to existing piping system.
- B. Do not complete connection of new piping system to existing piping system until flushing, cleaning, and utility testing of new piping system have been completed.

3.03 REMOVAL OF TEMPORARY FLUSHING AND CLEANING SYSTEMS

- A. Remove temporary pipe, fittings, valves, pumps, and tanks installed for flushing and cleaning. Furnish and install caps on plain ends of pipe, plugs in joints bells, and blind flanges on flanges after temporary piping is removed.
- B. If shut-down of Owner's piping system, or systems, is required to remove temporary piping, shut-down shall only be done by Owner. Notify Owner of requested shut-down not less than 48 hours in advance of requested shut-down. Coordinate removal of temporary piping with Owner's shut-down schedule.

END OF SECTION 33 36 13.05

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SECTION 33 36 13.06

POTABLE WATER PROCESS PIPE TESTING

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for testing potable water process piping.

1.02 REFERENCES

- A. General: References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. ANSI/AWWA Standards
 - 1. ANSI/AWWA Installation of Ductile-Iron Water Mains and Their Appurtenances C600

1.03 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 - 3. This Section
- B. Submit pressure recording charts for hydrostatic test to Engineer not more than 3 days following pressure test.

PART 2 – PRODUCTS

2.01 TEST EQUIPMENT, PIPING, WATER STORAGE VESSELS, AND APPURTENANCES

- A. Contractor shall be responsible for the selection of pressure test equipment, piping, water storage vessels, compressors, gas cylinders, and appurtenances.

PART 3 – EXECUTION

3.01 PIPE INSPECTION

- A. Inspect new piping prior to pressure test.
- B. Verify all bolts, studs, and nuts are installed in joints.
- C. Verify nuts are properly tightened on bolts and studs.
- D. Verify gaskets are installed. Verify gaskets are properly installed.

- E. Verify joint restraint is installed as shown and specified.
- F. Verify piping supports are installed as shown and specified.
- G. Verify concrete used for joint restraint and supports has achieved design strength.

3.02 PRESSURE TEST - GENERAL

- A. Test piping systems furnished and installed as a part of Work.
- B. Pressure test completed section of new piping systems as specified in this Section. During pressure test, perform visual examination of new piping systems as specified in this Section. Perform pressure test after flushing and cleaning have been successfully completed.
- C. Test completed piping sections of piping installed in existing piping systems as follows:
 - 1. If new piping sections can be isolated from existing utility piping, pressure test new piping section as specified in this Section and perform visual examination of new piping during pressure test as specified in this Section.
 - 2. If new piping sections cannot be isolated from existing utility piping that is not to be modified as part of the project, perform visual examination of new piping under system pressure as specified in this Section.
- D. Pressure test procedures for piping shall meet the requirements of the ANSI/AWWA Standard C605,
- E. Pressure test piping systems with potable water or reclaimed water.

3.03 PREPARATION FOR PRESSURE TEST

- A. Furnish and install taps and connections required to perform pressure test.
 - 1. If lower end of piping section to be tested is closed, provide tap at lower end of piping.
 - 2. Provide taps of adequate size to fill and pressurize piping section to be tested.
 - 3. Tap piping at high points, in piping section to be tested, if necessary to release air from piping.
- B. For pipe section with open end, or ends, install test plugs in open ends of piping section to be tested or test caps on open ends of piping section to be tested.
 - 1. Install test plugs so that test plugs do not blow out of line being tested.
 - 2. Install test caps so that test caps do not blow off of line being tested.
 - 3. Provide tap in each test plug and test cap.
- C. Provide taps of adequate size to fill and pressurize piping section to be tested.
- D. Taps, test plugs, and test caps shall be capable of holding 1.5 times the test pressure applied to the piping section to be tested.

3.04 FILLING LINE TO BE TESTED

- A. Place test water into line at lower end of line.
- B. Provide orifice at top of pipe in plug or cap at upper end of line.
- C. Provide orifice of adequate size to remove air from line.
- D. Expel air from piping prior to application of test pressure.

3.05 NOTIFICATION

- A. Notify Engineer and the North Port Utilities Utility Coordinator at least 48 hours in advance of start of pressure test.
- B. If the Engineer states that the Engineer will observe pressure test, do not start pressure test unless the Engineer is present. If the presence of the Engineer is required and testing is not observed by the Engineer, testing shall be repeated with the Engineer present at no additional cost to the Owner.
- C. If the Owner states that the Owner will observe pressure test, do not start pressure test unless the Owner is present. If the presence of the Owner is required and testing is not observed by the Owner, testing shall be repeated with the Owner present at no additional cost to the Owner.

3.06 HYDROSTATIC/PRESSURE TEST

- A. Test Pressure:..... 150 psi.
- B. Pressure Test Period: Not less than two consecutive hours.
- C. Pressure Recording
 - 1. Record test pressure and location of test.
 - 2. Use recording pressure gauge.
 - 3. Submit recording charts to Engineer.
- D. Carbon Steel / Stainless Steel Piping
 - 1. Apply test pressure to piping and turn test pumps off.
 - 2. Allow piping to stand without make-up pressure for entire test period.
 - 3. Test will be considered successful when pressure drop over test period is 5 psi or less.
 - 4. If pressure drop exceeds 5 psi, repair leaks and repeat test.
 - 5. Repair leaks and repeat test until pressure drop over test period is 5 psi or less.
- E. ASTM D1785 Schedule 80 PVC Piping and ASTM F441 CPVC Piping
 - 1. Apply test pressure to piping and turn test pumps off.
 - 2. Allow piping to stand without make-up pressure for entire test period.
 - 3. Test will be considered successful when pressure drop over test period is 5 psi or less.
 - 4. If pressure drop exceeds 5 psi, repair leaks and repeat test.

5. Repair leaks and repeat test until pressure drop over test period is 5 psi or less.

F. Visual Examination during Pressure Test

1. Visually examine exposed pipes, fittings, valves, hydrants, and joints during pressure test.
2. Visually examine ground surface and filled trenches along route of piping for visible leakage and indications of leakage.

3.07 VISUAL EXAMINATION UNDER SYSTEM PRESSURE

- A. For sections of new buried piping that cannot be isolated from existing utility piping not to be modified as part of the project, perform visual examination of new buried piping as follows:
 1. Leave buried joints visible until piping is subjected to system pressure.
 2. Visually examine pipe and fitting joints for visible leakage.
- B. For sections of new exposed piping that cannot be isolated from existing utility piping not to be modified as part of the project, perform visual examination of new exposed piping as follows:
 1. Visually examine exposed pipes, fittings, valves, and joints while piping is subjected to system pressure.
 2. Feel underside of joints.

3.8 TAPPING SLEEVE AND VALVE PRESSURE TEST

- A. Hydrostatically test tapping valve and tapping sleeve assembly prior to tapping existing pipe.
- B. Test pressure shall not be less than test pressure for piping system connecting to tap specified in this Section.
- C. Pressure test period shall not less than two consecutive hours.
- D. Allow piping to stand without make-up pressure for entire test period.
- E. Test will be considered successful when pressure drop over test period is 5 psi or less.
- F. If pressure drop exceeds 5 psi, repair leaks and repeat test.
- G. Repair leaks and repeat test until pressure drop over test period is 5 psi or less.

3.9 SYSTEM REPAIR

- A. Repair visible leaks.
- B. If piping system fails pressure test, locate and repair leaks. Replace defective pipe, fittings, valves, and other products at no additional cost to the Owner.
- C. Repeat utility piping testing and piping system repair until piping system meets the requirements of this Section.

3.10 TEST CLEAN-UP

- A. Remove testing equipment, piping, water storage vessels, and appurtenances.

- B. Remove test plugs and test caps after test is successfully completed.
- C. Plug taps in piping watertight after test is successfully completed.

END OF SECTION 33 36 13.06

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SECTION 33 36 23.20

DUCTILE IRON PIPE AND FITTINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for ductile iron pipe, fittings, and accessories.

1.02 REFERENCES

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

B. ANSI Standards

1. ANSI B16.1 Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800
2. ANSI B16.3 Malleable Iron Threaded Fittings, Class 150 and 300

C. ANSI/AWWA Standards

1. ANSI/AWWA C104/A21.4 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
2. ANSI/AWWA C105/A21.5 Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids
3. ANSI/AWWA C110/A21.10 Ductile-Iron and Gray-Iron Fittings 3-in. Through 48-in. for Water and Other Liquids
4. ANSI/AWWA C111/A21.11 Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings
5. ANSI/AWWA C115/A21.15 Flanged Ductile-Iron Pipe With Threaded Flanges
6. ANSI/AWWA C150/A21.50 Thickness Design of Ductile-Iron Pipe
7. ANSI/AWWA C151/A21.51 Ductile-Iron Pipe, Centrifugally Cast, for Water and Other Liquids
8. ANSI/AWWA C153/A21.53 Ductile Iron Compact Fittings, 3 In. Through 24 In. (76 mm Through 610 mm) and 54 In. Through 64 In. (1,400 mm Through 1,600 mm), for Water Service
9. ANSI/AWWA C600 Installation of Ductile-Iron Water Mains and Their Appurtenances

D. ASTM Standards

1. ASTM A193 Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service

2. ASTM A194 Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service
3. ASTM B117 Test Method of Salt Spray (Fog) Testing
4. ASTM D714 Test Method for Evaluating Degrees of Blistering of Paints
5. ASTM E96 Test Method for Water Vapor Transmission of Materials
6. ASTM F593 Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
7. ASTM F594 Specification for Stainless Steel Nuts
8. ASTM G95 Test Method for Cathodic Disbondment Test of Pipeline Coatings (Attached Cell Method)

E. European Standards

1. EN 598 Standard for Ductile Iron Pipe Fittings, Accessories, and Joints for Sewerage Applications

1.03 DEFINITIONS

- A. Buried Pipe and Fittings: Pipe and fittings installed in trenches and covered with soil. Pipe and fittings beneath structures and encased in concrete.
- B. Exposed Pipe and Fittings: Pipe and fittings that are not buried. Exposed pipe and fittings include: pipe and fittings outdoors aboveground; pipe and fittings in buildings; pipe and fittings on the interior of tanks; pipe and fittings on the interior of vaults; and pipe and fittings on the interior of pits.
- C. Size: Pipe and fittings sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.04 SUBMITTALS

- A. General: As specified in:
 1. Section 01 33 00 Submittal Procedures;
 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 3. This Section.
- B. Submit product data for ductile iron pipe and fittings, including the following:
 1. Reference to Section 33 36 23.20 Ductile Iron Pipe and Fittings;
 2. Product manufacturer's specifications;
 3. Intended service;
 4. Maximum working pressure;
 5. Materials of construction;
 6. Lining and coatings;
 7. Additional information required to evaluate the proposed product's compliance with the Contract Documents.

- C. Submit Certification attesting to the fact that:
 - 1. The ceramic epoxy lining applicator met the requirements of this Section; and
 - 2. The ceramic epoxy lining material used was as specified in this Section.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Ductile iron pipe, fittings, and joint accessories in potable water service shall comply with the requirements of the Safe Drinking Water Act and shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 61.
- B. Marking
 - 1. Mark pipe and fittings.
 - 2. Markings shall meet the requirements of applicable Standards.
- C. Factory Tests
 - 1. Test materials used in the manufacture of ductile iron pipe and fittings.
 - 2. Tests shall meet the requirements of applicable Specifications and Standards.
- D. Field Testing: Field test pipe, fittings, and accessories under Section 15203 Testing Process Piping.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General
 - 1. Delivery: As specified in Section 01 65 00 Product Delivery Requirements.
 - 2. Storage and Handling: As specified in Section 01 66 00 Product Storage and Handling.
- B. Piping Products
 - 1. Deliver pipe, fittings, and accessories in a clean and undamaged condition. Store pipe, fittings, and accessories off the ground.
 - 2. Keep interior of pipe, fittings, and accessories free from dirt and foreign matter.
 - 3. Store gaskets and other products which will be deteriorated by sunlight in a cool location out of direct sunlight.
 - 4. Gaskets shall not come in contact with petroleum products.
 - 5. Do not stack ductile iron pipe higher than the limits shown in ANSI/AWWA C600. Stacking of pipe shall meet the requirements of the pipe manufacturer. Do not stack fittings.
 - 6. Ductile iron pipe and fittings with ceramic epoxy lining shall be handled only from the outside of the pipe and fittings. No forks, chains, straps, hooks, cables, or other devices shall be placed inside the pipe and fittings for lifting, positioning, or laying.

PART 2 – PRODUCTS

2.01 DUCTILE IRON PIPE, FITTINGS, AND ACCESSORIES

A. Manufacturers

1. Ductile Iron Pipe

- a. American Cast Iron Pipe Company;
- b. McWane Cast Iron Pipe Company;
- c. United States Pipe & Foundry Company;

B. Ductile Iron Pipe

1. General:

- a. Ductile Iron Pipe, whether it be full length pipe or fabricated', shall be manufactured, tested, and inspected in the United States.
- b. Pipe that is found on the project not to have been manufactured domestically will be rejected, marked, and removed from the project site.

1. Material Standard for Ductile Iron Pipe:.....ANSI/AWWA C151/A21.51.

2. Ductile Iron Pipe Standard:.....ANSI/AWWA C151/A21.51.

3. Ductile Iron Pipe Minimum Thickness

a. Flange Joint Ductile Iron Pipe

- 1) Thickness Standard for FlangeANSI/AWWA C115/A21.15,
Joint Ductile Iron Pipe: Table 15.1.
- 2) Minimum Thickness of Flange Class 53.
Joint Ductile Iron Pipe:
- 3) Working Pressure Rating for 250 psi.
Flange Joint Ductile Iron Pipe:

C. Fittings for Ductile Iron Pipe

1. Material:Ductile iron or cast iron.

2. Fitting Joint Type:As specified in this Section.

3. Flange Joint Ductile Iron and Cast Iron Fittings

a. Material Standard for Flange Joint Fittings:ANSI/AWWA C110/A21.10.

b. Flange Joint Fitting Standards

- 1) 3-inch through 48-inch DuctileANSI/AWWA C110/A21.10.
Iron Fittings:
- 2) 48-inch and Larger Ductile Design and performance to
Iron Fittings: meet the requirements of
ANSI/AWWA C110/A21.10.

c. Pressure Rating for Flange Joint Fittings: 150 psi.

- D. Ductile Iron Pipe and Fitting Joints
 - 1. Joint Type
 - a. Joints for Exposed Ductile Iron Pipe and Fittings:.....Flange joints
 - 2. Restrained Push-on Joints for Ductile Iron Pipe
 - a. American Cast Iron Pipe Company Fast-Grip gasket (4-inch - 12-inch), Flex-Ring, Field Flex-Ring, Lok-Ring, and Lok-Fast;
 - b. McWane Cast Iron Pipe Company Super Lock;
 - c. United States Pipe & Foundry Company Field Lok gasket (4-inch - 12-inch) and TR-Flex;
 - d. Or equal restrained push-on joint.
 - 3. Restraining Mechanical Joints
 - a. EBAA Iron Sales, Inc., Megalug Series 1100;
 - b. Or equal retainer gland.
 - 4. Unrestrained Push-on Joints and Mechanical Joints for Ductile Iron Pipe and Fittings
 - a. Joint Standard: ANSI/AWWA C111/A21.11
 - 5. Flanges for Ductile Iron Pipe and Fittings
 - a. Material for Ductile Iron Pipe and Fittings
 - 1) Pipe Flanges:..... Ductile iron
 - 2) Fitting Flanges: Ductile iron or cast iron
 - b. Flange Standard for Ductile Iron Pipe and Fittings
 - 1) Ductile Iron Pipe Flanges:.....ANSI/AWWA C115/A21.15.
 - 2) Ductile Iron Fitting Flanges:ANSI/AWWA C110/A21.10.
 - c. Dimension Standard for Ductile Iron Flanges:.....ANSI B16.1, Class 125.
 - d. Face Type for Ductile Iron Flanges:.....Flat.
 - e. Coating for Machine Faces:.....Rust-inhibitive primer.
- E. Linings for Ductile Iron Pipe and Fittings
 - 1. Bituminous Lining
 - a. Provide bituminous lining for the following piping systems:
 - 1) Grit Piping.
 - b. Bituminuous Lining Material Standard
 - 1) Bituminous Lining for Centrifugally.....ANSI/AWWA C151/A21.51.
Cast Ductile Iron Pipe:
 - 2) Bituminous Lining for FlangedANSI/AWWA C115/A21.15.
Ductile Iron Pipe:
 - 3) Bituminous Lining for Ductile Iron Fittings:ANSI/AWWA C110/A21.10.

2. Ceramic Epoxy Lining
 - a. Provide ceramic epoxy lining for the following piping systems:
 - 1) Raw Wastewater Piping;
 - 2) Partially Treated Wastewater Piping;
 - 3) Mixed Liquor Piping;
 - 4) Primary Sludge Piping;
 - 5) Scum Piping; and
 - 6) Supernatant Piping.
 - b. Ceramic epoxy lining shall be Protecto 401 Ceramic Epoxy as specified in this Section.
3. Cement Lining
 - a. Provide cement lining for the following piping systems:
 - 1) Potable Water Piping;
 - 2) Reuse (Reclaimed) Water Piping;
 - 3) Effluent Piping;
 - 4) Water Treatment Process Piping;
 - 5) Return Activated Sludge Piping;
 - 6) Waste Activated Sludge Piping;
 - 7) Plant Water Piping;
 - 8) Plant Drain System Piping; and
 - 9) Other ductile iron piping not specified to have bituminous lining or ceramic epoxy lining.
 - b. Cement Lining Material:.....Cement mortar lining with seal coat.
 - c. Cement Lining Material Standard: ANSI/AWWA C104/A21.4
 - d. Cement Lining Thickness:Single thickness unless otherwise noted on the Drawings.

F. Coating for Ductile Iron Pipe and Fittings

1. Coating for Buried Ductile Iron Pipe and Fittings
 - a. Material:Asphaltic coating.
 - b. Coating Standard:ANSI/AWWA C151/A21.51.
2. Coating for Exposed Ductile Iron Pipe and Fittings
 - a. Material:Rust inhibitive primer.
 - b. Specification:As specified in Section 09900 Painting.

2.02 JOINT ACCESSORIES

A. Mechanical Joint, Push-on Joint, and Restrained Joint Accessories

1. Standard for Ductile Iron and Cast Iron Mechanical Joint, Push-on Joint, and Restrained Joint Gaskets:.....ANSI/AWWA C111/A21.11.
 2. Bolts and Nuts for Mechanical Joints
 - a. Bolts for Mechanical Joints
 - 1) Type:Tee-head.
 - 2) Material:.....Cast iron.
 - 3) Standard:.....ANSI/AWWA C111/A21.11.
 - b. Nuts for Mechanical Joints
 - 1) Type: Hexagon
 - 2) Material:.....Cast iron.
 - 3) Standard:.....ANSI/AWWA C111.A21.11.
- B. Flange Joint Accessories
1. Flange Joint Gaskets
 - a. Flange Joint Gasket Type for Ductile Iron Piping:.....American Toruseal, or equal, full face gaskets.
 - b. Flange Joint Gasket Thickness:..... 1/8-inch.
 - c. Flange Joint Gasket Material
 - 1) Potable Water Service: EPDM.
 - 2) Air Service: EPDM.
 - 3) Wastewater Service:.....neoprene.
 - 4) Reclaimed (Reuse) Water Service:.....neoprene.
 2. Bolts, Studs, and Nuts for Flange Joints
 - a. Bolts for Flange Joints
 - 1) Type: Semi-finished regular hexagon head cap screws.
 - 2) Material:.....AISI 316 stainless steel.
 - 3) Standard:.....ASTM A193 or ASTM F593.
 - 4) Threads: UNC threads.
 - b. Studs for Flange Joints
 - 1) Material:.....AISI 316 stainless steel.
 - 2) Standard:.....ASTM A193 or ASTM F593.
 - 3) Threads: UNC threads.
 - 4) Length: Extend through nuts a minimum of 1/2-inch.

c. Nuts for Flange Joints

- 1) Type: Semi-finished regular hexagon nuts.
- 2) Material:.....AISI 316 stainless steel.
- 3) Standard:.....ASTM A194 or ASTM F594.
- 4) Threads: UNC threads.

3. Flange Coupling Adapters

- a. Flange Coupling Adapter for Ductile Iron to Flanged Joint.....ROMAC RFCA

2.03 PROTECTO 401 CERAMIC EPOXY LINING

A. Condition of Ductile Iron Pipe Prior to Surface Preparation for Lining

1. Ductile pipe and fittings to receive Protecto 401 Ceramic Epoxy Lining shall be delivered to the application facility without asphalt, cement lining, or any other lining on the interior surface.
2. Because removal of old linings may not be possible, the entire interior of the ductile iron pipe and fittings shall not have been lined with any substance prior to the application of the specified lining material, and no coating shall have been applied to the first six inches of the exterior of the spigot ends.

B. Ceramic Epoxy Lining Material

1. General: Ceramic epoxy lining material for ductile iron pipe and fittings shall be Protecto 401 Ceramic Epoxy, or equal. The material shall be an amine cured novalac epoxy containing at least 25% by volume of ceramic quartz pigment. Any request for substitution shall be accompanied by the following:
 - a. Successful history of lining pipe and fittings for sewer service;
 - b. Test report verifying the following properties; and
 - c. Certification of test results.
2. Lining Material Permeability
 - a. Permeability Rating: 0.00
 - b. Permeability Test Standard: Method A of ASTM E96-66, Procedure A with a test duration of 30 days.
3. Coupon Test: The following tests shall be run on coupons from factory lined ductile iron pipe:
 - a. ASTM B117 Salt Spray (scribed panel) with results to equal 0.0 undercutting after two years.
 - b. ASTM G095 Cathodic Disbondment 1.5 volts @ 77°F with results to equal no more than 0.5mm undercutting after 30 days.
 - c. Immersion Testing rated using ASTM D714-87
 - 1) 20% Sulfuric Acid with no effect after two years.
 - 2) 25% Sodium Hydroxide with no effect after two years.
 - 3) 160°F Distilled Water with no effect after two years.

- 4) 120°F Tap Water (scribed panel) with 0.0 undercutting after two years with no effect.

4. Abrasion Resistance

- a. Maximum Allowable Loss: Not to exceed 4 mils. (0.10mm) loss after one million cycles.
- b. Abrasion Resistance Test Standard: European Standard EN 598: 1994 section 7.8 Abrasion resistance.

- C. Ceramic Epoxy Lining Application

1. Applicator: Ceramic epoxy lining shall be applied by a competent firm with a successful history of applying linings to the interior of ductile iron pipe and fittings.
2. Surface Preparation
 - a. Prior to abrasive blasting, the entire area to receive the protective compound shall be inspected for oil, grease, and other substances which may affect lining quality. Solvent clean areas where oil, grease, or any substance which can be removed by solvent, is present. Solvent cleaning shall meet the requirements of the guidelines outlined in DIPRA-1 Solvent Cleaning.
 - b. After the surface has been made free of grease, oil or other substances, areas to receive the protective compounds shall be abrasive blasted using compressed air nozzles with sand or grit abrasive media. The entire surface to be lined shall be struck with the blast media so that all rust, loose oxides, and scale are removed from the surface. Only slight stains and tightly adhering annealing oxide may be left on the surface.
 - c. Any area where rust reappears before lining shall be reblasted.
3. Lining
 - a. After the surface preparation, and within 8 hours of surface preparation, the interior of the pipe shall receive 40 mils nominal dry film thickness of Protecto 401, or equal, lining.
 - b. No lining shall take place when the substrate or ambient temperature is below 40 degrees Fahrenheit. The surface shall be dry and dust free.
 - c. Do not apply lining to face of flanges.
4. Coating of Spigot Ends
 - a. Due to the tolerances involved, spigot end up to 6 inches back from the end of the spigot end must be coated with 6 mils nominal, 10 mils maximum Protecto Joint Compound, or equal material supplied by the lining material manufacturer.
 - b. Joint compound shall be applied by brush to ensure coverage.
 - c. Care shall be taken that the joint compound is smooth without excess buildup on the spigot ends.
 - d. Coating of the spigot ends shall be done after the application of the lining.
5. Number of Coats

- a. The number of coats of lining material applied shall be as recommended by the lining manufacturer. However, in no case shall this material be applied above the dry thickness per coat recommended by the lining manufacturer in printed literature.
 - b. The maximum or minimum time between coats shall be that time recommended by the lining material manufacturer.
 - c. No material shall be used for lining which is not indefinitely recoatable with itself without roughening of the surface.
6. Touch-Up & Repair: Protecto Joint Compound, or equal material supplied by the lining material manufacturer, shall be used for touch-up or repair in accordance with manufacturer's recommendations.
- D. Ductile Iron Pipe and Fitting Lining Inspection and Certification
1. Inspection
 - a. All ductile iron pipe and fitting ceramic epoxy linings shall be checked for thickness using a magnetic film thickness gauge. Thickness testing shall be done using the method outlined in SSPC-PA-2 Film Thickness Rating.
 - b. The interior lining of pipe barrels and fittings shall be tested for pinholes with a non-destructive 2,500 volt test. Any defects found shall be repaired prior to shipment.
 - c. Each pipe joint and fitting shall be marked with the date of application of the ceramic epoxy lining system along with its numerical sequence of application on that date and records maintained by the applicator of his work.
 2. Certification: The pipe or fitting manufacturer must supply a certificate attesting to the fact that the applicator met the requirements of this Section, and that the material used was as specified.

PART 3 – EXECUTION

3.01 INSTALLATION, GENERAL

- A. Install ductile iron pipe, fittings, and accessories as specified in Section 15201 Installation of Process Piping, General and this Section.
- B. Installation of ductile-iron water mains and appurtenances shall meet the requirement of ANSI/AWWA C600.

3.02 CUTTING PIPE

- A. General: Field cuts may be made for shorter than standard pipe lengths.
- B. Ductile Iron Pipe
 1. Field cut ductile iron pipe with either hand or mechanical saws or mechanical pipe cutters. Use proper tool, machine, or tool and machine for ductile iron pipe.
 2. Do not cut pipe by burning.
 3. Pipe ends shall be saw cut square and perpendicular to pipe axis.
 4. Examine cut ends for damage caused by cutting.

5. Finish cut ends of pipe. Finish plain end pipe for mechanical joints and push-on joints as follows:
 - a. Bevel outside of the cut ends of pipe about one-quarter inch (1/4-inch) at an angle of about thirty degrees (30°).
 - b. Remove sharp and rough edges, which might injure gasket.

3.03 JOINT ASSEMBLY METHODS FOR PUSH-ON JOINTS AND MECHANICAL JOINTS

- A. Use methods and procedures to assemble pipe, fitting, and valve joints that provide completed joints that meet the requirements of the Specifications without damage to pipe, fittings, valves, and appurtenances.
 1. Push pipe by means of block and push bar.
 2. Do not push pipe if pushing will damage pipe being installed or pipe previously installed.
 3. Do not push pipe if joint gaskets are "rolled", cut, or otherwise damaged by pushing.
 4. Where pushing will damage pipe or joint, use mechanical means consisting of cable placed inside pipe with winch, jack, or come-along to pull pipe "home".

3.04 MECHANICAL JOINTS

- A. Cleaning Ductile Iron Mechanical Joint Bells and Gaskets
 1. Wire brush inside of each ductile iron pipe, fitting, and valve bell.
 2. Wipe bell clean of dirt, oil, grease, and other foreign matter.
 3. Wipe bell dry.
- B. Cleaning Spigot Ends
 1. Remove lumps, blisters, and excess bituminous coating from spigot end of each pipe. Remove lumps, blisters, and excess bituminous coating from spigot end of each plain end fitting.
 2. Wire brush outside of each ductile iron spigot.
- C. Cleaning Mechanical Joint Gaskets
 1. Wipe each gasket clean of dirt, dust, and other foreign matter.
 2. Inspect gasket for cuts and gouges. Inspect gasket for deterioration due to contact with foreign substances. Do not use damaged gaskets.
- D. Joining Pipe to Ductile Iron Fittings and Valves with Mechanical Joints
 1. Brush spigot and gasket with soapy water.
 2. Slip mechanical joint gland on spigot end of pipe with gland extension toward the end of the pipe being installed.
 3. Place mechanical joint rubber gasket on spigot end of pipe with thick edge of gasket toward gland.
 4. Center spigot end of pipe in bell of previously installed pipe, fitting, or valve.

5. Push or pull pipe fully “home” as specified in this Section. (Note: Depth of mechanical joint bell is less than depth of push-on joint bell. Therefore, insertion mark on spigot end of full length section of push-on joint pipe cannot be installed flush with face of mechanical joint bell.)

E. Joining Ductile Iron Fittings and Valves with Mechanical Joints to Ductile Iron Pipe

1. Brush spigot and gasket with soapy water.
2. Slip mechanical joint gland on spigot end of pipe with gland extension toward the end of the installed pipe.
3. Place mechanical joint rubber gasket on spigot end of pipe with thick edge of gasket toward gland.
4. Center bell of fitting or valve over spigot end of previously installed pipe.
5. Push or pull fitting or valve fully “home” as specified in this Section. (Note: Depth of mechanical joint bell is less than depth of push-on joint bell. Therefore, insertion mark on spigot end of full length section of push-on joint pipe cannot be installed flush with face of mechanical joint bell.)

F. Completing Mechanical Joint

1. Push gasket into place within the bell with gasket evenly located around entire joint.
2. Move gland into position against face of gasket.
3. Loosely assemble joint bolts and nuts.
4. Evenly tighten nuts using a torque wrench. Alternately tighten nuts 180° apart. Torque shall be within range as follows:

Joint Size and Type	Bolt Size	Torque Range
4-inch through 24-inch Mechanical Joints	3/4-inch	75 to 90 foot-pounds
30-inch and 36-inch Mechanical Joints	1-inch	100 to 120 foot-pounds
42-inch and 48-inch Mechanical Joints	1¼-inch	120 to 150 foot-pounds

5. Bring pipe, fitting, or valve to correct line and grade.
 - a. Deflect pipe or fitting after joining, if deflection is required. Deflection of pipe and fittings with ANSI/AWWA C111/A21.11 mechanical joints shall not exceed the following limits:

Size	Maximum Allowable Deflection
4-inch Pipe and Fittings	31.0 inches in 18 feet (8°18')
6-inch Pipe and Fittings	27.0 inches in 18 feet (7°07')
8-inch through 12-inch Pipe and Fittings	20.0 inches in 18 feet (5°21')

Size	Maximum Allowable Deflection
14-inch and 16-inch Pipe and Fittings	13.5 inches in 18 feet (3°35')
18-inch and 20-inch Pipe and Fittings	11.0 inches in 18 feet (3°00')
24-inch and 30-inch Pipe and Fittings	9.0 inches in 18 feet (2°23')
36-inch through 48-inch Pipe and Fittings	8.0 inches in 18 feet (2°00')

b. Do not deflect valve joints.

6. Secure buried pipe, fitting, or valve with haunching and backfill specified in Section 02317 Pipe Bedding and Haunching, and Trench Backfill.

3.05 PUSH-ON JOINTS

A. Cleaning Push-on Joint Bells

1. Wire brush inside of each ductile iron bell.
2. Wipe bell clean of dirt, oil, grease, and other foreign matter.
3. Wipe bell dry.

B. Cleaning Spigot Ends

1. Remove lumps, blisters, and excess bituminous coating from spigot end of each pipe. Remove lumps, blisters, and excess bituminous coating from spigot end of each plain end fitting.
2. Wire brush outside of each ductile iron spigot.

C. Cleaning Push-on Joint Gaskets

1. Wipe each gasket clean of dirt, dust, and other foreign matter.
2. Inspect gasket for cuts and gouges. Inspect gasket for deterioration due to contact with foreign substances. Do not use damaged gaskets.

D. Joining Pipe and Fittings with Push-on Joints

1. Seat gasket in bell of receiving pipe or fitting.
2. Lubricate spigot end of pipe being installed, using lubricant furnished by pipe manufacturer.
3. Center spigot end of pipe in bell of previously installed length of pipe.
4. Support pipe being installed so that pipe being installed is joined along the centerline of receiving pipe.
5. Push, pull, or push and pull pipe or fitting "home" as specified in this Section.
6. If unusual joining resistance is encountered or if the insertion mark does not reach the flush position do the following:
 - a. Pull pipe apart. When pulling pipe apart, secure previously installed pipe so that previously installed piping is not damaged and previously completed joints are not disturbed.
 - b. Remove gasket from receiving bell.

- c. Examine spigot end of pipe being installed.
 - 1) Measure spigot and determine if pipe eccentricity is within allowable tolerances. Remove and replace pipe if pipe eccentricity is not within allowable tolerances.
 - 2) Check end of pipe for burrs and other defects that would impair proper jointing. Check end bevel. Correct imperfections in end of pipe, or remove and replace pipe.
 - d. Install new gasket.
 - e. Repeat assembly steps.
7. After joining, check gasket and verify that gasket has not pushed out of gasket seat and that gasket is uniformly compressed around pipe spigot. If gasket is not fully seated, uniformly compressed, or fully seated and uniformly compressed, do the following:
- a. Pull pipe apart. When pulling pipe apart, secure previously installed pipe so that previously installed piping is not damaged and previously completed joints are not disturbed.
 - b. Remove gasket.
 - c. Install new gasket.
 - d. Repeat assembly steps.

3.06 FLANGE JOINTS

A. Cleaning Joint Surfaces

1. Remove anti-rust coating from machined metal surfaces.
2. Clean joint surfaces of the pipe, fittings, and valves being joined.
3. Wipe surfaces clean of dirt, oil, grease, and other foreign matter.
4. Wipe surfaces dry.
5. Wipe each gasket clean of dirt, dust, and other foreign matter.

B. Making Flange Joints

1. Align flange of pipe, fitting, or valve being installed with flange of receiving pipe, fitting, or valve.
2. Support pipe, fittings, and valves being joined so that flanges are properly aligned.
3. Lubricate bolts and nuts prior to installation of bolts and nuts.
4. Clean gasket. Remove sand, dirt, and other foreign matter from gasket. Inspect gasket for defects. Inspect gasket for damage.
5. Hold gasket so that one gasket hole is aligned with one of the two flange holes nearest top of flange. Place bolt through flange and gasket hole. Carefully allow gasket to rotate into position between flanges. Place second bolt in remaining flange hole nearest top of flange and through hole in gasket. Make sure all gasket holes are properly aligned with remainder of flange holes.
6. Place remainder of bolts in flange holes.

7. Install nuts on bolts. Run-up all nuts finger tight.
8. Tighten nuts to 30 percent of specified torque in a crisscrossed pattern as follows:
 - a. Tighten one nut to 30 percent of specified torque;
 - b. Tighten nut 180 degrees from first nut to 30 percent of specified torque;
 - c. Tighten nut 90 degrees clockwise from first nut to 30 percent of specified torque;
 - d. Tighten nut 270 degrees clockwise from first nut to 30 percent of specified torque;
 - e. Tighten nuts adjacent to first four nuts, in a clockwise direction, to 30 percent of specified torque in the same crisscrossed sequence; and
 - f. Continue advancing crisscrossed pattern, in a clockwise direction, until all nuts are tightened to 30 percent of specified torque.
9. Tighten nuts to 60 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.
10. Tighten nuts to 90 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.
11. Tighten nuts, in one final pass performed in a clockwise bolt-to-bolt sequence, to the following torque:

Size	Bolt Torque
4-inch Pipe and Fittings	100 ft.-lbs
6-inch and 8-inch Pipe and Fittings	150 ft.-lbs
10-inch and 12-inch Pipe and Fittings	200 ft.-lbs
14-inch and 16-inch Pipe and Fittings	250 ft.-lbs
18-inch and 20-inch Pipe and Fittings	300 ft.-lbs
24-inch and 30-inch Pipe and Fittings	400 ft.-lbs
36-inch through 48-inch Pipe and Fittings	500 ft.-lbs
54-inch through 64-inch Pipe and Fittings	600 ft.-lbs

3.07 JOINING DUCTILE IRON PIPE WITH SLEEVE TYPE COUPLINGS

A. Pipe Preparation for Sleeve Type Couplings

1. Ductile Iron Pipe

- a. Remove lumps, blisters, and excess bituminous coating from plain end of ductile iron pipe and fitting, and wire brush outside of ductile iron pipe.
- b. Length of ductile iron pipe end preparation shall not be less than 12 inches from end of pipe.
- c. Ductile iron pipe OD shall not be more than 1/64-inch smaller than the standard outside diameter of ductile iron pipe.

B. Cleaning Sleeve Type Couplings

1. Wash and wipe coupling clean of dirt, oil, grease, and other foreign matter.
2. Wipe coupling dry.
3. Wipe each gasket clean of dirt, dust, and other foreign matter.

C. Joining Pipe with Sleeve Type Couplings

1. Brush pipe and gaskets with soapy water.
2. Slip coupling gland on end of each pipe with gland extension toward the end of pipe.
3. Place coupling rubber gasket on end of each pipe with thick edge of gasket toward gland.
4. Place coupling sleeve over the end of one of the pipes being joined.
5. Align ends of pipe being joined.
6. Adjust coupling sleeve and gaskets so that gaskets are equal distance from both pipe ends.
7. Move coupling glands into position against gasket faces.
8. Loosely assemble coupling bolts and nuts.
9. Evenly tighten bolts and nuts.
10. Tighten bolts and nuts so that coupling joints will not leak.
11. Do not over-torque bolts and nuts.
12. Bring pipe and coupling to correct line and grade. Do not exceed deflection limits recommended by coupling manufacturer.

3.08 MANUFACTURERS' REPRESENTATIVE

A. Pipe Manufacturer's Representative

1. Provide services of pipe manufacturer's representative as required to obtain correct installation of pipe, fittings, and accessories.
2. Provide assistance of pipe manufacturer's representatives at no additional cost to the Owner.

B. Joint Restraining Device Manufacturer's Representative

1. Provide services of joint restraining device manufacturer's representative as required to obtain correct installation of joint restraining devices and accessories.
2. Provide assistance of joint restraining device manufacturer's representatives at no additional cost to the Owner.

END OF SECTION 33 36 23.20

SECTION 40 20 70

STAINLESS STEEL PIPE AND FITTINGS - AISI TYPE 304

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for AISI Type 304 and 304L stainless steel pipe, fittings, and accessories.

1.02 REFERENCES

- A. General: References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. ANSI Standards
 - 1. ANSI B16.5 Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys
 - 2. ANSI B16.9 Factory-Made Wrought Steel Buttwelding Fittings
- C. ANSI/ASME Standards
 - 1. ANSI/ASME B36.19M Stainless Steel Pipe
- D. ANSI/AWS Standards
 - 1. ANSI/AWS D10.4 Recommended Practice for Welding Austenitic Chromium-Nickel Stainless Steel Pipe and Tubing
- E. ASTM Standards
 - 1. ASTM A182 Specification for Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service
 - 2. ASTM A193 Specification for Alloy-Steel and Stainless Steel Nuts for Bolts for High-Pressure and High-Temperature Service
 - 3. ASTM A194 Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service
 - 4. ASTM A312 Specification for Seamless and Welded Austenitic Stainless Steel Pipe
 - 5. ASTM A778 Specifications for Welded, Unannealed Austenitic Stainless Steel Tubular Products
 - 6. ASTM F593 Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
 - 7. ASTM F594 Specification for Stainless Steel Nuts

1.03 DEFINITIONS

- A. Buried Pipe and Fittings: Pipe and fittings installed in trenches and covered with soil. Pipe and fittings beneath structures and encased in concrete.
- B. Exposed Pipe and Fittings: Pipe and fittings that are not buried. Exposed pipe and fittings include: pipe and fittings outdoors aboveground; pipe and fittings in buildings; pipe and fittings on the interior of tanks; pipe and fittings on the interior of vaults; and pipe and fittings on the interior of pits.
- C. Pipe, fittings, and valve sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.04 SUBMITTALS

- A. Submit product data for AISI Type 304 or 304L stainless steel pipe and fittings, including the following:
 - 1. Product manufacturer's specifications;
 - 2. Materials of construction;
 - 3. Fabrication Details;
 - 4. Details of restraints and attachments;
 - 5. Additional information required to confirm compliance with the Contract Documents;
 - 6. Welding certifications;
 - 7. List of exceptions and associated explanation, if any, to these specifications.

1.05 QUALITY ASSURANCE

- A. Marking
 - 1. Mark pipe and fittings to verify materials and compliance with applicable standards.
- B. Welder Qualifications
 - 1. Stainless steel piping systems welding shall be by welders qualified and certified under provisions of AWS to weld austenitic chromium-nickel stainless steel pipe and tubing.
 - 2. Welders shall be certified by an independent local, acceptable testing agency not more than 12 months prior to commencing work.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General
 - 1. Deliver pipe, fittings, and accessories in a clean and undamaged condition. Store pipe, fittings, and accessories off the ground.
 - 2. Keep interior of pipe, fittings, and accessories free from dirt and foreign matter.
 - 3. Stacking of pipe shall meet the requirements of the pipe manufacturer. Do not stack fabrications or fittings.

PART 2 PRODUCTS

2.01 AISI 304L STAINLESS STEEL PIPING, GENERAL

- A. Wall thickness for pipe and fittings with weld joints, flange joints, or clamp type coupling joints shall be as follows unless otherwise shown or specified:
 - 1. All 4-inch and 6-inch piping: Schedule 40.
- B. Wall thickness for pipe and fittings with threaded joints shall be as follows unless otherwise shown or specified:
 - 1. All Sizes: Schedule 40.

2.02 AISI TYPE 304 and 304L STAINLESS STEEL PIPE AND FITTINGS

- A. Manufacturers and Fabricators
 - 1. Stainless Steel Pipe
 - a. Avesta-Sheffield Pipe Company;
 - b. Carpenter Technology;
 - c. Or equal.
 - 2. Stainless Steel Fittings
 - a. Camco Fitting Company;
 - b. Flowline;
 - c. Or equal.
 - 3. Stainless Steel Pipe Fabricator/Supplier
 - a. Douglas Brothers;
 - b. Or equal.
- B. Stainless Steel Pipe
 - 1. Welded Pipe Material: AISI 304L stainless steel, UNS S30403.
 - 2. Pipe Standard:ASTM A312 or ASTM A778.
 - 3. Pipe Dimension Standard:..... ANSI/ASME B36.19M.
- C. Fittings for AISI 304L Stainless Steel Pipe
 - 1. Fitting Material:..... AISI 304 stainless steel, UNS S30403.
 - 2. Fitting Material Standard
 - a. Fittings for ASTM A312 pipe:.....ASTM A403.
 - b. Fittings for ASTM A778 pipe:.....ASTM A774.
 - 3. Fitting Standard
 - a. Forged/Wrought Stainless Steel Fittings:..... ASTM A182, Grade 304.
 - b. Cast Stainless Steel Fittings: ASTM A351, Grade CF8.
 - 4. Fitting Dimension Standard
 - a. Weld Joint Fittings

- 1) Wall Thickness: ANSI/ASME B36.19M.
- 2) Fitting Dimensions: ANSI B16.9.
- b. Threaded Joint Fittings:ANSI B16.3, Class 150.

2.03 STAINLESS STEEL PIPING JOINTS

A. Joints for 4-inch through 6-inch Stainless Steel Pipe and Fittings

- 1. Exposed 4-inch through 6-inch Stainless Steel Pipe, Fitting, and Valve Joints
 - a. Pipe to Pipe Joints:.....Flanged or welded.
 - b. Fitting to Fitting Joints:.....Flanged or welded.
 - c. Pipe to Fitting Joints:Flanged or welded.
 - d. Pipe to Valve Joints: Flanged.
 - e. Fitting to Valve Joints: Flanged.

2.04 FLANGES AND FLANGE JOINT ACCESSORIES FOR AISI 304 and 304L STAINLESS STEEL PIPE AND FITTINGS

A. Flanges For Stainless Steel Pipe And Fittings

- 1. Flange Material for AISI 304L pipe shall be AISI 304L stainless steel, UNS S30403.
- 2. Flange Standard:.....ASTM A182.
- 3. Dimension Standard:.....ANSI B16.5, Class 150.
- 4. Flange Type
 - a. Flange for Schedule 40S Welding neck or slip-on.
Stainless Steel Pipe:
- 5. Flange Face Type: raised face.

B. Flange Joint Accessories

- 1. Flange Joint Gaskets
 - a. Flange Joint Gasket Type for.....American Toruseal, or
Ductile Iron Piping: equal, full face gaskets.
 - b. Flange Joint Gasket Thickness:..... 1/8-inch.
 - c. Flange Joint Gasket Material
 - 1) Potable Water Service: EPDM.
 - 2) Air Service: EPDM.
 - 3) Wastewater Service:.....neoprene.
 - 4) Reclaimed (Reuse) Water Service:.....neoprene.

2. Bolts, Studs, and Nuts for Flange Joints

a. Bolts for Flange Joints

- 1) Type: Semi-finished regular hexagon head cap screws.
- 2) Material:..... AISI 316 stainless steel.
- 3) Standard:.....ASTM A193 or ASTM F593.
- 4) Threads: UNC threads.

b. Studs for Flange Joints

- 1) Material:..... AISI 316 stainless steel.
- 2) Standard:.....ASTM A193 or ASTM F593.
- 3) Threads: UNC threads.
- 4) Length: Extend through nuts a minimum of 1/2-inch.

c. Nuts for Flange Joints

- 1) Type: Semi-finished regular hexagon nuts.
- 2) Material:..... AISI 316 stainless steel.
- 3) Standard:.....ASTM A194 or ASTM F594.
- 4) Threads: UNC threads.

3. Flange Coupling Adapters

- a. Flange Coupling Adapter for Ductile Iron to Flanged Joint.....ROMAC RFCA

C. Flange Isolation Gasket Kits

Flange isolation gasket kits shall be installed where indicated on the Drawings. In addition to one full-faced insulated gasket, each flange insulating assembly shall consist of one full-length sleeve, two insulating washers, and two backing washers for each flange bolt. The insulating gasket ID shall be 1/8 inch less than the ID of the flange in which it is installed. The insulating flanged joint accessories shall be installed in accordance with the instructions and recommendations of the insulating kit manufacturer. Flange Isolation Gasket shall be NSF 61 Certified, EPDM element within G-10 Epoxy Glass retainer material, Linebacker 61 Sealing/Isolation Gasket kit, or equal.

2.05 SHOP FABRICATIONS

A. General

- 1. Shop fabricate 4-inch and larger stainless steel pipe and fittings in sections as large as practical while assuring fit-up of piping system without stressing flanges, pumps, valves, or devices.
- 2. Pipe and fitting joints in shop fabrications shall be weld joints. Ends of shop fabrications shall have flanges or plain ends. Plain ends shall be prepared for field installed couplings or field welding.

3. Where clamp type couplings are used to connect fittings to pipe or fittings to fittings, to be installed, shop fabricate fittings with straight pipe sections of sufficient length for clamp type coupling joints.

B. Shop Welding

1. Shop welding procedures for stainless steel pipe shall meet requirements of ANSI/AWS D10.4.
2. Prepare pipe edges by machine shaping or cutting. Bevel ends of pipe and fittings with wall thicknesses of 3/16-inch and larger. Bevel ends of stainless steel pipe to meet requirements of ANSI/AWS D10.4. Separate abutting pipe ends before welding, and completely fuse inside walls of pipe without overlapping. Welding shall be continuous around the joint and shall be completed without interruption. Welds shall be single vee butt type, of sound weld metal thoroughly fused into the ends of pipe and into bottom of vee. Welds shall be free from cold spots, pin-holes, oxide inclusions, burrs, snags, rough projections or other defects.

C. Protection and Finish of Fabrications

1. Passivate welded joint stainless steel pipe, fittings, and pipe assemblies in the factory using procedures specified in this Section, unless otherwise approved by the Engineer.
2. Wire brush outside weld area. Remove weld splatter. Brushes shall be stainless steel and used only on stainless steel.
3. Remove carbon deposits, grease, and oil by pickling and neutralization.
4. Completely immerse stainless steel assemblies and parts after welding and brushing. Completely immerse stainless steel assemblies and parts in pickling solution of 6% nitric acid and 3% hydrofluoric acid at 1400F for 15 to 20 minutes. Parts shall be free of iron particles or other foreign material following pickling.
5. Following pickling, completely immerse stainless steel assemblies and parts in tri-sodium phosphate rinse. Parts shall be neutralized following immersion in tri-sodium phosphate.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. General: Install stainless steel pipe, fittings, and accessories as specified in this Section. Pipe shall be installed without stressing or deflecting or forcing flanges or fittings, or fit-up to connecting pump flanges to make pressure tight leak free bolted connections.

3.02 CUTTING PIPE

- A. General: Field cuts may be made for shorter than standard pipe lengths.
- B. Stainless Steel Pipe
 1. Field cut stainless steel pipe with either hand or mechanical saws or mechanical pipe cutters. Use proper tool, machine, or tool and machine for stainless steel pipe.

2. Do not cut pipe by burning.
3. Do not flatten pipe ends.
4. Pipe ends shall be saw cut square and perpendicular to pipe axis.
5. Examine cut ends for damage caused by cutting.
6. Finish cut ends of pipe.
 - a. Plain End Pipe for Sleeve Type and Clamp Type Couplings: Remove sharp and rough edges which might injure gasket.
 - b. Weld Joint Pipe (If field weld joints are approved by the Engineer)
 - 1) Square and smooth pipe ends.
 - 2) Bevel ends of stainless steel pipe as recommended in ANSI/AWS D10.4.

3.03 CLAMP TYPE COUPLING JOINTS

- A. Cleaning Ends of Stainless Steel Pipe: Remove dirt, debris, and other deleterious substances from plain ends of pipe and wipe plain ends of pipe dry.
- B. Cleaning Clamp Type Couplings
 1. Wash and wipe coupling clean of dirt, oil, grease, and other foreign matter.
 2. Wipe coupling dry.
 3. Wipe gasket clean of dirt, dust, and other foreign matter.
- C. Joining Stainless Steel Pipe with Clamp Type Couplings
 1. Place both coupling gasket O-rings and coupling over the end of one of the pipes being joined.
 2. Align ends of pipe being joined.
 3. Slide one coupling gasket O-ring off of pipe end where gasket was previously placed. Then slide coupling gasket O-ring onto end of other pipe being joined.
 4. Adjust coupling gaskets O-rings so that O-rings are equal distance from both pipe ends and are spaced so that O-rings are centered in coupling grooves.
 5. Slide coupling over coupling gasket with coupling grooves aligned with coupling gasket O-rings and coupling joint centered on gasket filler connecting gasket O-rings.
 6. Evenly tighten bolts and nuts.
 7. Tighten bolts and nuts so that joint will not leak.
 8. Do not over-torque bolts and nuts.
 9. Bring pipe and coupling to correct line and grade. Do not exceed deflection limits recommended by coupling manufacturer.

3.04 FLANGE JOINTS

- A. Cleaning Joint Surfaces
 1. Clean joint surfaces of the pipe, fittings, and valves being joined.
 2. Wipe surfaces clean of dirt, oil, grease, and other foreign matter.

3. Wipe surfaces dry.
 4. Wipe each gasket clean of dirt, dust, and other foreign matter.
- B. Making Flange Joints
1. Align flange of pipe, fitting, or valve being installed with flange of receiving pipe, fitting, or valve.
 2. Support pipe, fittings, and valves being joined so that flanges are properly aligned.
 3. Lubricate bolts and nuts prior to installation of bolts and nuts.
 4. Clean gasket. Remove sand, dirt, and other foreign matter from gasket. Inspect gasket for defects. Inspect gasket for damage.
 5. Hold gasket so that one gasket hole is aligned with one of the two flange holes nearest top of flange. Place bolt through flange and gasket hole. Carefully allow gasket to rotate into position between flanges. Place second bolt in remaining flange hole nearest top of flange and through hole in gasket. Make sure all gasket holes are properly aligned with remainder of flange holes.
 6. Place remainder of bolts in flange holes.
 7. Install nuts on bolts. Run-up all nuts finger tight.
 8. Tighten nuts to 30 percent of specified torque in a crisscrossed pattern as follows:
 - a. Tighten one nut to 30 percent of specified torque;
 - b. Tighten nut 180 degrees from first nut to 30 percent of specified torque;
 - c. Tighten nut 90 degrees clockwise from first nut to 30 percent of specified torque;
 - d. Tighten nut 270 degrees clockwise from first nut to 30 percent of specified torque;
 - e. Tighten nuts adjacent to first four nuts, in a clockwise direction, to 30 percent of specified torque in the same crisscrossed sequence; and
 - f. Continue advancing crisscrossed pattern, in a clockwise direction, until all nuts are tightened to 30 percent of specified torque.
 9. Tighten nuts to 60 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.
 10. Tighten nuts to 90 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.
 11. Tighten nuts, in one final pass performed in a clockwise bolt-to-bolt sequence, to the following torque:

Size		Bolt Torque Range	
2-inch through 3-inch	Pipe and Fittings	35 to 70	ft.-lbs
4-inch through 6-inch	Pipe and Fittings	40 to 80	ft.-lbs
8-inch	Pipe and Fittings	50 to 100	ft.-lbs
10-inch	Pipe and Fittings	75 to 150	ft.-lbs
12-inch	Pipe and Fittings	100 to 200	ft.-lbs

<u>Size</u>		<u>Bolt Torque Range</u>
14-inch and 16-inch	Pipe and Fittings	125 to 250 ft.-lbs
18-inch and 20-inch	Pipe and Fittings	150 to 300 ft.-lbs
24-inch through 30-inch	Pipe and Fittings	200 to 400 ft.-lbs
36-inch and 42-inch	Pipe and Fittings	300 to 500 ft.-lbs
48-inch through 60-inch	Pipe and Fittings	500 to 600 ft.-lbs

3.05 THREADED JOINTS FOR STAINLESS STEEL PIPE, FITTINGS, AND VALVES

- A. Do not field thread stainless steel pipe.
- B. Clean stainless steel threads by brushing with a stainless steel wire brush used only on stainless steel. Remove dirt, burrs, and other substances which would interfere with joining and sealing. Do not damage threads.
- C. Make joints leak-tight by use of Teflon tape. Do not apply Teflon tape to the first two threads on the pipe.
- D. Do not over-tighten threaded joints. Do not damage pipe exterior with pipe wrench or other tools.

3.06 FIELD WELD JOINTS FOR STAINLESS STEEL PIPE AND FITTINGS

A. General

1. Do not field weld stainless steel pipe or fittings, unless field welding is approved in writing by the Engineer.
 - a. Welding in field shall be performed only when requested on shop drawings and accepted by Owner and Engineer in writing as specified in this Section.
 - b. Field welding of stainless steel pipe or fittings will only be considered by the Engineer if:
 - 1) Contractor submits documentation of welder's certification to perform welding and documentation of welder's experience in welding stainless steel pipe; and
 - 2) Contractor can demonstrate that pipe can be welded to meet requirements of referenced standards.
2. If field welding is not approved by the Engineer, provide clamp type coupling joints or flange joints, as specified in this Section and the appropriate piping material Section, at no additional cost to the Owner.

B. Field Weld Joints for Stainless Steel Pipe and Fittings, if Field Weld Joints are Approved by the Engineer

1. Welding procedures for stainless steel pipe shall meet requirements of ANSI/AWS D10.4.
2. Separate abutting pipe ends before welding, and completely fuse inside walls of pipe without overlapping. Welding shall be continuous around the joint and shall be completed without interruption. Welds shall be single vee butt type, of sound weld metal thoroughly fused into the ends of pipe and into bottom of vee. Welds

shall be free from cold spots, pin-holes, oxide inclusions, burrs, snags, rough projections or other defects.

3. Protect and finish stainless steel weld joints as follows:
 - a. Wire brush outside weld area. Remove weld splatter. Brushes shall be stainless steel and used only on stainless steel.
 - b. Remove surface oxidation by brushing, or grinding and brushing.
4. Secure buried pipe and fittings with haunching and backfill specified in Section 02317 Trenching and Backfilling.

3.07 CLEANING EXTERIOR OF STAINLESS STEEL PIPING

- A. Do not paint exterior surfaces of stainless steel pipe or fittings.
- B. Wipe surfaces of stainless steel pipe and fittings clean of dirt, oil, grease, and other foreign matter. Solvent clean surfaces as required to remove oil, grease, and other foreign matter.
- C. Remove paint spatter by solvent cleaning or wire brushing. Remove surface oxidation by brushing, or grinding and brushing. Brushes shall be stainless steel and used only on stainless steel.
- D. Following solvent cleaning, brushing, and grinding, wash surfaces with detergent solution followed by a clean water rinse. Wipe surfaces dry.

3.08 VISUAL EXAMINATION UNDER SYSTEM PRESSURE

- A. For new exposed piping that cannot be isolated from existing process piping perform visual examination of new exposed piping as follows:
 1. Visually examine exposed pipes, fittings, valves, and joints while piping is subjected to system pressure for leaks.
- B. Contractor shall repair all visible leaks.

END OF SECTION 40 20 70

SECTION 33 36 23.25

ASTM D1785 SCHEDULE 80 PVC PIPE AND FITTINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for ASTM D1785 Schedule 80 PVC utility pipe, fitting, and accessories.

1.02 REFERENCES

- A. General: References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. ANSI Standards
1. ANSI B16.5 Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys
 2. ANSI B20.1 Pipe Threads, General Purpose (Inch)
- C. ASTM Standards
1. ASTM A193 Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
 2. ASTM A194 Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service
 3. ASTM D1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
 4. ASTM D1785 Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
 5. ASTM D2464 Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
 6. ASTM D2467 Specification for Socket-Type Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
 7. ASTM D2564 Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings
 8. ASTM D2672 Specification for Joints for IPS PVC Pipe Using Solvent Cement
 9. ASTM D2855 Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings
 10. ASTM D4024 Specification for Reinforced Thermosetting Resin (RTR) Flanges
 11. ASTM F402 Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings

1.03 DEFINITIONS

- A. Buried Pipe and Fittings: Pipe and fittings installed in trenches and covered with soil. Pipe and fittings beneath structures and encased in concrete.
- B. Exposed Pipe and Fittings: Pipe and fittings that are not buried. Exposed pipe and fittings include: pipe and fittings outdoors aboveground; pipe and fittings in buildings; pipe and fittings on the interior of tanks; pipe and fittings on the interior of vaults; and pipe and fittings on the interior of pits.
- C. Size: Pipe and fittings sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.04 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01 33 00 Submittal Procedures;
 - 2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
 - 3. This Section.
- B. Submit product data for Schedule 80 PVC pipe and fittings including the following:
 - 1. Reference to Section 33 26 23.25 ASTM D1785 Schedule 80 PVC Reclaimed Water Utility Pipe and Fittings;
 - 2. Product manufacturer's specifications;
 - 3. Pipe materials of construction;
 - 4. Flange joint gasket materials;
 - 5. Flange joint bolt and nut materials;
 - 6. Thread joint sealant materials; and
 - 7. Additional information required to evaluate proposed product's compliance with the Contract Documents.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Schedule 80 PVC pipe and fittings in potable water service shall comply with the requirements of the Safe Drinking Water Act and shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 61.
- B. Marking
 - 1. Mark pipe and fittings.
 - 2. Markings shall meet the requirements of applicable Standards.
- C. Factory Tests
 - 1. Test materials used in the manufacture of Schedule 80 PVC pipe and fittings.
 - 2. Tests shall meet the requirements of applicable Specifications and Standards.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General

1. Product Delivery: As specified in Section 01 65 00 Product Delivery Requirements.
2. Product Storage and Handling: As specified in Section 01 66 00 Product Storage and Handling.

B. Piping Products

1. Deliver pipe, fittings, and accessories in a clean and undamaged condition. Store pipe, fittings, and accessories off the ground.
2. Keep interior of pipe, fittings, and accessories free from dirt and foreign matter.
3. Store plastic pipe and fittings, gaskets, and other products which will be deteriorated by sunlight in a cool location out of direct sunlight.

PART 2 – PRODUCTS

2.01 SCHEDULE 80 PVC PIPE AND FITTINGS

A. Schedule 80 PVC Pipe

1. Material Standard for..... ASTM D1784, Class 12454-B.
Schedule 80 PVC Pipe:
2. Pipe Standard for ASTM D1785, Schedule 80.
Schedule 80 PVC Pipe:

B. Fittings for Schedule 80 PVC Pipe

1. Fitting Material:..... PVC
2. Fitting Material Standard: ASTM D1784, Polyvinyl Chloride
shall be Class 12454-B.

3. PVC Fittings

- a. Fitting Standard for..... ASTM D2467.
Socket Solvent Weld Fittings:
- b. Fitting Standard for..... ASTM D2464.
Threaded Joint Fittings:

C. Pipe and Fitting Joints for Schedule 80 PVC Pipe and Fitting

1. Joints for Buried Schedule 80 PVC Pipe and Fittings
 - a. Pipe to Pipe Joints:..... Solvent socket weld.
 - b. Pipe to Fitting Joints: Solvent socket weld.
 - c. Fitting to Fitting Joints:..... Solvent socket weld.
 - d. Pipe to Valve Joints: Solvent socket weld or threaded.
 - e. Fitting to Valve Joints: Solvent socket weld or threaded.
 - f. Schedule 80 PVC Piping to Threaded.
Other Piping Materials:

2. Joints for Exposed Schedule 80 PVC Pipe and Fittings
 - a. Pipe to Pipe Joints:..... Solvent socket weld.
 - b. Pipe to Fitting Joints: Solvent socket weld.
 - c. Fitting to Fitting Joints:..... Solvent socket weld.
 - d. Pipe to Valve Joints: Solvent socket weld, threaded, or flange.
 - e. Fitting to Valve Joints: Solvent socket weld, threaded, or flange.
 - f. Schedule 80 PVC Piping to Threaded or flange.
Other Piping Materials:

2.02 SOLVENT WELD JOINTS FOR SCHEDULE 80 PVC PIPE AND FITTINGS

- A. Solvent Weld Joint Standard for ASTM D2672
Schedule 80 PVC Pipe and Fittings:
- B. Primer for PVC Solvent Socket Weld Pipe and Fittings
 1. Material: Stabilized tetrahydrofuran, or equal.
 2. Installation Condition Criteria:..... Hot, windy conditions.
- C. Solvent Joint Cement
 1. Material Standard: ASTM D2564.
 2. Cement Container Size: No larger than one pint.
 3. Cement Applicator:..... Dauber secured to the container lid.

2.03 THREADED JOINTS FOR SCHEDULE 80 PVC PIPE AND FITTINGS

- A. Thread Standard for Schedule 80 ANSI B20.1.
PVC Pipe and Fittings:
- B. Threaded Joint Sealant for Schedule 80 PVC Pipe and Fittings
 1. Threaded joint sealant for Schedule 80 PVC pipe and fittings shall be NSF tested and certified.
 2. Threaded joint sealant for Schedule 80 PVC pipe and fittings shall be non-hardening, soft setting formulation that remains crushable to -50°F.
 3. Threaded joint sealant for Schedule 80 PVC pipe and fittings shall be non-corrosive and non-conductive.
 4. Threaded joint sealant for Schedule 80 PVC pipe and fittings shall seal joints between PVC threaded pipe and PVC threaded sockets and joints between PVC threaded pipe and metal threaded sockets.
 5. Thread sealant for Schedule 80 PVC pipe and fittings shall be Spears Blue 75 Thread Sealant, or equal.

2.04 FLANGES AND FLANGE JOINT ACCESSORIES FOR SCHEDULE 80 PVC PIPE AND FITTINGS

- A. Flanges for Schedule 80 PVC Pipe and Fittings
 1. Flange Material for Schedule 80 PVC.
PVC Pipe and Fittings:

2. Flange Standard for Schedule 80 PVC Pipe and Fitting Flanges: ASTM D4024.
 3. Dimension Standard for Schedule 80 PVC Pipe and Fitting Flanges:ANSI B16.5, Class 150.
 4. Face Type for Schedule 80 PVC Pipe and Fitting Flanges:Flat.
- B. Flange Joint Accessories for Schedule 80 PVC Pipe and Fittings, General
1. Flange Joint Gaskets, General
 - a. Gasket Type: Full face.
 - b. Gasket Thickness: 1/8-inch.
 - c. Gasket Material: EPDM
 2. Bolts for Flange Joints, General
 - a. Type: semi-finished regular hexagon head cap screws.
 - b. Standard:ASTM A193.
 - c. Threads: UNC threads.
 - d. Bolt Material:Hastelloy C
 3. Studs for Flange Joints, General
 - a. Standard:ASTM A193.
 - b. Threads: UNC threads.
 - c. Length: Extend through nuts a minimum of 3/8-inch.
 - d. Stud Material:Hastelloy C
 4. Nuts for Flange Joints, General
 - a. Type: Semi-finished regular hexagon nuts.
 - b. Standard:ASTM A194.
 - c. Threads: UNC threads.
 - d. Nut Material:Hastelloy C

PART 3 – EXECUTION

3.01 INSTALLATION

- A. General: Install Schedule 80 PVC pipe, fittings, and accessories as specified in this Section and in Section 33 36 13.04 Piping Installation – General.
- B. Thermal Expansion: Provide allowance for thermal expansion and contraction for exposed PVC pipe passing through a wall, floor, ceiling or partition by wrapping with an approved tape or pipe insulation, or by installing through an appropriately sized sleeve to allow for thermal movement.

- C. Abrasion Protection: Provide protection against abrasion where PVC pipe comes in contact with other building members by wrapping pipe with an approved tape, pipe insulation or otherwise suitable method of isolation.
- D. Adapters and Flanges
 - 1. Install solvent socket weld to male-thread adapters or solvent socket weld to female-thread adapters adjacent to each threaded valve and threaded equipment connection in a Schedule 80 PVC pipe system, as appropriate to valve and equipment end connections.
 - 2. Install Schedule 80 PVC flanges adjacent to each flanged valve and flanged equipment connection in a Schedule 80 PVC pipe system.

3.02 CUTTING SCHEDULE 80 PVC PIPE

- A. Field cuts may be made for shorter than standard pipe lengths.
- B. Field cut Schedule 80 PVC pipe with either hand or mechanical saws or pipe cutters. Use proper tool, machine, or tool and machine for PVC pipe.
- C. Do not cut pipe by burning.
- D. Do not flatten pipe ends. Do not crimp plastic pipe.
- E. Pipe ends shall be saw cut square and perpendicular to pipe axis.
- F. Examine cut ends for damage caused by cutting.
- G. Finish cut ends of pipe. Square pipe ends and remove burrs. Smooth pipe ends.

3.03 SOLVENT SOCKET WELD JOINTS FOR PVC PIPE, FITTINGS, AND VALVES

- A. Cleaning Sockets for Joining Solvent Cement PVC Pipe and Fittings
 - 1. Wash and wipe socket clean of dirt, oil, grease, and other foreign matter.
 - 2. Wipe socket dry.
- B. Cleaning Spigot End of PVC Pipe
 - 1. Remove dirt, debris, and other deleterious substances from spigot end of pipe.
 - 2. Wipe spigot end of pipe dry.
- C. Join PVC pipe, fittings, and valves with solvent socket weld joints as follows:
 - 1. Solvent socket weld joints shall meet the requirements of ASTM D2855.
 - 2. Handling of solvent cement shall meet the requirements of ASTM F402.
 - 3. Secure buried pipe, fitting, or valve with haunching and backfill specified in Section 31 23 43 Pipe Haunching and Backfill.

3.04 THREADED JOINTS FOR PVC PIPE, FITTINGS, AND VALVES

- A. Do not field thread PVC pipe.
- B. Clean PVC threads by brushing with a stiff bristle brush. Remove dirt, spurs, and other substances which would interfere with joining and sealing. Do not damage threads.

- C. Make joints leak-tight by use of NSF tested and certified thread sealant. Apply thread sealant in accordance with manufacturer's written recommendations. Thread sealant shall be Spears Blue 75 Thread Sealant, or equal.
- D. Do not over-tighten threaded joints. Do not damage or mar pipe exterior with pipe wrench or other tools.

3.05 FLANGE JOINTS

A. Cleaning Joint Surfaces

1. Clean joint surfaces of the pipe, fittings, and valves being joined.
2. Wipe surfaces clean of dirt, oil, grease, and other foreign matter.
3. Wipe surfaces dry.
4. Wipe each gasket clean of dirt, dust, and other foreign matter.

B. Making Flange Joints

1. Align flange of pipe, fitting, or valve being installed with flange of receiving pipe, fitting, or valve.
2. Support pipe, fittings, and valves being joined so that flanges are properly aligned.
3. Lubricate bolts and nuts prior to installation of bolts and nuts.
4. Clean gasket. Remove sand, dirt, and other foreign matter from gasket. Inspect gasket for defects. Inspect gasket for damage.
5. Hold gasket so that one gasket hole is aligned with one of the two flange holes nearest top of flange. Place bolt through flange and gasket hole. Carefully allow gasket to rotate into position between flanges. Place second bolt in remaining flange hole nearest top of flange and through hole in gasket. Make sure all gasket holes are properly aligned with remainder of flange holes.
6. Place remainder of bolts in flange holes.
7. Install nuts on bolts. Run-up all nuts finger tight.
8. Tighten nuts to 30 percent of specified torque in a crisscrossed pattern as follows:
 - a. Tighten one nut to 30 percent of specified torque;
 - b. Tighten nut 180 degrees from first nut to 30 percent of specified torque;
 - c. Tighten nut 90 degrees clockwise from first nut to 30 percent of specified torque;
 - d. Tighten nut 270 degrees clockwise from first nut to 30 percent of specified torque;
 - e. Tighten nuts adjacent to first four nuts, in a clockwise direction, to 30 percent of specified torque in the same crisscrossed sequence; and
 - f. Continue advancing crisscrossed pattern, in a clockwise direction, until all nuts are tightened to 30 percent of specified torque.
9. Tighten nuts to 60 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.

- 10 Tighten nuts to 90 percent of specified torque in a crisscrossed pattern identical to the crisscrossed pattern used to tighten nuts to 30 percent of specified torque.
11. Tighten nuts, in one final pass performed in a clockwise bolt-to-bolt sequence, to the following torque:

Size	Bolt Torque
½-inch through 1½-inch Pipe and Fittings	10 to 15 ft.-lbs
2-inch through 4-inch Pipe and Fittings	20 to 30 ft.-lbs
6-inch and 8-inch Pipe and Fittings	33 to 50 ft.-lbs
10-inch Pipe and Fittings	53 to 75 ft.-lbs
12-inch Pipe and Fittings	80 to 110 ft.-lbs

3.06 JOINING SCHEDULE 80 PVC PIPE WITH SLEEVE TYPE COUPLINGS

A. Pipe Preparation for Sleeve Type Couplings

1. Remove dirt, debris, and other deleterious substances from plain end of PVC pipe, and wipe end of pipe dry.
2. Length of PVC pipe end preparation shall not be less than 12 inches from end of pipe.
3. PVC pipe OD shall not be more than 1/64-inch smaller than the standard outside diameter of PVC pipe.

B. Cleaning Sleeve Type Couplings

1. Wash and wipe coupling clean of dirt, oil, grease, and other foreign matter.
2. Wipe coupling dry.
3. Wipe each gasket clean of dirt, dust, and other foreign matter.

C. Joining Pipe with Sleeve Type Couplings

1. Brush pipe and gaskets with soapy water.
2. Slip coupling gland on end of each pipe with gland extension toward the end of pipe.
3. Place coupling rubber gasket on end of each pipe with thick edge of gasket toward gland.
4. Place coupling sleeve over the end of one of the pipes being joined.
5. Align ends of pipe being joined.
6. Adjust coupling sleeve and gaskets so that gaskets are equal distance from both pipe ends.
7. Move coupling glands into position against gasket faces.
8. Loosely assemble coupling bolts and nuts.
9. Evenly tighten bolts and nuts.
10. Tighten bolts and nuts so that coupling joints will not leak.

11. Do not over-torque bolts and nuts.
12. Bring pipe and coupling to correct line and grade. Do not exceed deflection limits recommended by coupling manufacturer.
13. Secure buried pipe, fitting, or valve with haunching and backfill specified in Section 31 23 43 Pipe Haunching and Backfill.

END OF SECTION 33 36 23.25

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SECTION 33 36 33 15

BUTTERFLY VALVES, IRON BODY

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for iron body butterfly valves and appurtenances.
- B. Related Sections: Section 33 36 13.03 Pipe, Fittings, Valves, Piping Specialties, and Accessories - General.

1.02 REFERENCES

- A. General: References to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
- B. ANSI Standards
 - 1. ANSI B16.1 Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800
- C. ANSI/NSF Standards
 - 1. ANSI/NSF 61 Drinking Water Systems Components – Health Effects
- C. AWWA Standards
 - 1. AWWA C504 Rubber Seated Butterfly Valves

1.03 DEFINITIONS

- A. Buried Valves: Valves installed in trenches, or excavations, and covered with soil.
- B. Exposed Valves: Valves that are not buried. Exposed valves includes valves outdoors aboveground, valves in buildings, valves on the interior of tanks, valves on the interior of vaults, and valves on the interior of pits.
- C. References to valve sizes on the Drawings and in the Specifications are intended to be nominal size, and shall be interpreted as nominal size.

1.04 SUBMITTALS

- A. General: As specified in:
 - 1. Section 01331 Submittals;
 - 2. Section 01332 Shop Drawings, Product Data, and Samples; and
 - 3. This Section.
- B. Submittals for butterfly valves shall include, but not necessarily be limited to, the following:
 - 1. Product data

2. Operator and accessories for each valve.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Materials for butterfly valves in potable water service shall comply with the requirements of the Safe Drinking Water Act.
- B. Testing: Test valves as specified in this Section.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General
 1. Delivery: As specified in Section 01650 Product Delivery Requirements.
 2. Storage and Handling: As specified in Section 01660 Product Storage and Handling.
- B. Iron Body Butterfly Valves
 1. Deliver valves in a clean and undamaged condition. Store valves off the ground.
 2. Keep interior of valves free from water, dirt, and other foreign matter.
 3. Keep resilient seats out of direct sunlight.
 4. Do not stack valves. Do not stack other products on valves.

PART 2 – PRODUCTS

2.01 IRON BODY BUTTERFLY VALVES

- A. General: As specified in Section 15234 Process Piping Valves, General.
- B. Manufacturers
 1. Kennedy
- C. Valve Standard: AWWA C504.
- D. Valve Body Type, Service, and Classification (per AWWA C504)
 1. Wafer Valves (All Services): Class 150B
 2. Short-body Flange Valves
 - a. Water and Wastewater Service: Class 150B, unless otherwise shown or specified.
 - b. Process Air Service: Class 25B, minimum
 3. Long-body Flange Valves
 - a. Water and Wastewater Service: Class 150B, unless otherwise shown or specified.
 - b. Process Air Service: Class 75B, minimum
- E. Shutoff: Drip tight at full valve rating with pressure in either direction.

F. Materials

1. General

- a. Butterfly valve materials specifically specified in this Section shall be as specified in this Section.
- b. Butterfly valve materials not specifically specified in this Section shall meet the requirements of AWWA C504.

2. Rubber Seats

- a. Butterfly valve seats for the following services shall be EPDM:
 - 1) Raw water supply piping;
 - 2) Water treatment piping;
 - 3) Potable water transmission and distribution piping;
 - 4) Plant water supply piping; and
 - 5) Process air piping.
- b. Butterfly valve seats for the following services shall be Buna N
 - 1) Wastewater treatment effluent piping;
 - 2) Reject water piping;
 - 3) Supplemental reclaimed (reuse) water supply piping; and
 - 4) Reclaimed (reuse) water transmission and distribution piping.

3. Mating Surfaces for Rubber Seats

- a. Modulating Valves
 - 1) Modulating Valves in Water, Wastewater, and Reclaimed (Reuse) Water Service: Stainless steel or nickel-copper alloy.
 - 2) Modulating Valves in Air Service: AISI 316 stainless steel
- b. Isolation Valves
 - 1) Isolation Valves in Water, Wastewater, and Reclaimed (Reuse) Water Service: Meet requirements of AWWA C504, unless otherwise specified.
 - 2) Isolation Valves in Air Service: AISI 316 stainless steel

G. Valve Shaft Seals

1. Valve shaft seals shall be self-adjusting split V packing.
2. Valve shaft seals shall be replaceable without removing valve shaft.

H. Joints

1. Exposed Valves

- a. Joint Type for Exposed Butterfly Valves with Electric Motor Actuators: Flange joint.
- b. Joint Type for Exposed Butterfly Valves with Lever or Gear Actuators, in Water or Wastewater Service: Flange joint.

- c. Joint Type for Exposed Butterfly Valves with Lever or Gear Actuators, in Air Service: Wafer style, lug style, or flange joint; provide flange joint valves where flange joints are shown on the Drawings.
 - d. Joint Standard for Exposed Butterfly Valves with Flange Joints: AWWA C504.
- F. Operators and Accessories
- 1. Operator Type
 - a. If Operator Type Shown on Drawings: As shown on the Drawings.
 - b. If Operator Type Not Shown on Drawings
 - 1) Exposed Butterfly Valves
 - a) 8-inch and Larger Valves: Gear actuators.
 - b) 6-inch and Smaller Valves: Lever operators.
 - 2. Accessories
 - a. Exposed Butterfly Valves
 - 1) Bonnet Extensions: Provide bonnet extensions, if required to raise valve actuators above the valve operating floor.
 - 2) Limit Switches: Provide gear actuator with limit switches for exposed valves shown, or specified to be provided, with limit switches.

PART 2 – EXECUTION

3.01 INSTALLATION

- A. Install butterfly valves, operators, and accessories:
 - 1. As specified in Section 33 36 13.04 Piping Installation - General;
 - 2. In accordance with valve manufacturer's written installation instructions; and
 - 3. As shown on the Drawings.
- B. Install joints for valve connections to inlet and outlet piping as specified in appropriate piping material Section.

3.02 FIELD TESTS

- A. Hydrostatic Test: Hydrostatically test valves with piping in which valves are installed.
- B. Functional Test: Demonstrate proper operation of valves to Engineer.

3.03 MANUFACTURERS' REPRESENTATIVE

- A. Provide services of valve manufacturer's representative as required to obtain correct installation of valves and accessories.
- B. Provide assistance of valve manufacturer's representatives at no additional cost to the Owner.

END OF SECTION 33 36 33.15

SECTION 33 36 43.53

PIPING SLEEVES, ADAPTERS, AND COUPLINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for piping sleeves, adapters, couplings, and accessories.

1.02 REFERENCES

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

B. ANSI Standards

1. ANSI B16.1 Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800

C. ANSI/AWWA Standards

1. ANSI/AWWA C110/A21.10 Ductile-Iron and Gray-Iron Fittings 3-in. Through 48-in. for Water and Other Liquids
2. ANSI/AWWA C111/A21.11 Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings

D. ASTM Standards

1. ASTM A126 Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
2. ASTM A193 Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
3. ASTM A194 Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service
4. ASTM A536 Specification for Ductile Iron Castings
5. ASTM F593 Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
6. ASTM F594 Specification for Stainless Steel Nuts

1.03 DEFINITIONS

- A. Buried Sleeves, Adapters, and Couplings: Sleeves, adapters, and couplings installed in trenches and covered with soil. Sleeves, adapters, and couplings beneath structures and encased in concrete.
- B. Exposed Sleeves, Adapters, and Couplings: Sleeves, adapters, and couplings that are not buried. Exposed sleeves, adapters, and couplings includes sleeves, adapters,

and couplings outdoors aboveground, piping in buildings, sleeves, adapters, and couplings on the interior of tanks, sleeves, adapters, and couplings on the interior of vaults, sleeves, adapters, and couplings on the interior of pits.

- C. Size: Pipe, sleeve, adapter, and coupling sizes and references to pipe diameter on the Drawings and in the Specifications are intended to be nominal size or diameter, and shall be interpreted as nominal size or diameter.

1.04 SUBMITTALS

A. General: As specified in:

1. Section 01 33 00 Submittal Procedures;
2. Section 01 33 23 Shop Drawings, Product Data, and Samples; and
3. This Section.

B. Submit product data for sleeves, adapters, and couplings.

1.05 QUALITY ASSURANCE

A. Testing: Test sleeves, adapters, and couplings with piping in which sleeves, adapters, and couplings are installed.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General

1. Product Delivery: As specified in Section 01 65 00 Product Delivery Requirements.
2. Product Storage and Handling: As specified in Section 01 66 00 Product Storage and Handling.

B. Piping Products

1. Deliver sleeves, adapters, couplings, and accessories in a clean and undamaged condition. Store sleeves, adapters, couplings, and accessories off the ground.
2. Keep interior of sleeves, adapters, couplings, and appurtenances free from dirt and foreign matter.
3. Store gaskets and other products which will be deteriorated by sunlight in a cool location out of direct sunlight.
4. Gaskets shall not come in contact with petroleum products.
5. Do not stack sleeves, adapters, or couplings.

PART 2 – PRODUCTS

2.01 SLEEVE-TYPE, DUCTILE IRON COUPLINGS (3-INCH THROUGH 16-INCH)

A. Manufacturers and Products

1. Straight Couplings for Ductile Iron Pipe OD:
 - a. JCM Industries, JCM 210;

- b. Or equal straight sleeve type, ductile iron couplings for ductile iron outside diameter.
 2. Restrained Joint, Straight Couplings for Ductile Iron Pipe:
 - a. JCM Industries, JCM 219;
 - b. Or equal straight sleeve type, ductile iron, restrained joint, couplings for ductile iron pipe.
 3. Straight Couplings for Steel Pipe OD:
 - a. JCM Industries, JCM 211;
 - b. Or equal straight sleeve type, ductile iron couplings for steel pipe outside diameter.
 4. Transition Couplings:
 - a. JCM Industries, JCM 212;
 - b. Or equal ductile iron, transition couplings.
- B. Coupling Description
 1. Sleeve type couplings for 3-inch through 16-inch pipe shall be ductile iron.
 2. Sleeve-type, ductile iron coupling shall include the following components:
 - a. One ductile iron middle ring;
 - b. Two ductile iron follower flanges;
 - c. Two molded rubber gaskets; and
 - d. Sufficient bolts and nuts to properly compress the gaskets.
- C. Coupling Size
 1. Straight Coupling: Both ends of coupling shall fit outside diameter of piped to be coupled.
 2. Transition Couplings: Coupling follower and coupling gasket on one end of coupling shall fit outside diameter of asbestos-cement pipe machined spigot, or outside diameter of plain end steel pipe, as appropriate. Coupling follower and coupling gasket on opposite end of coupling shall fit outside diameter of plain end ductile iron pipe.
- D. Middle Rings
 1. Material: Ductile Iron.
 2. Casting Standard: ASTM A536.
 3. Interior of Rings: Smooth without pipe stop.
 4. Length
 - a. Couplings for 3-inch through 12-inch Pipe: 6 inches
 - b. Couplings for 14-inch and 16-inch Pipe: 7 inches

E. Followers

1. Type: Single-piece with drilled lugs.
2. Material: Ductile Iron.
3. Casting Standard: ASTM A536.
4. Shape: As required provide positive confinement of gasket.

F. Gaskets for Sleeve-type Couplings

1. Gaskets shall be EPDM:

G. Bolts and Nuts

1. Bolts for Sleeve-type Couplings

- a. Type: Track headed.
- b. Material: AISI 316 stainless steel.
- c. Standard: ASTM A193 or ASTM F593
- d. Threads: Rolled thread.

2. Nuts for Sleeve-type Couplings

- a. Type: Hexagon head
- b. Material: AISI 316 stainless steel
- c. Standard: ASTM A194 or ASTM F594.
- d. Threads: To match bolts.

H. Pipe Preparation for Sleeve-Type Couplings

1. Pipe End Configuration: Plane ends.
2. Pipe End Surfaces: Smooth
3. Length of End Preparation: 12 inches from the ends of the pipe.
4. Pipe OD Tolerance: Not more than 1/64-inch smaller than the standard outside diameter of the pipe.

2.02 SLEEVE-TYPE, STEEL COUPLINGS (18-INCH THROUGH 48-INCH)

A. Manufacturers and Products

1. Rockwell (Smith-Blair), Style 411;
2. Dresser, Style 38;
3. Ford Meter Box Co., Inc., Style FC1 or FC3;
4. JCM Industries, Inc., JCM 201;
5. Or equal straight sleeve type couplings.

B. Coupling Description

1. Sleeve type couplings for 18-inch through 48-inch pipe shall be steel.
2. Sleeve-type, steel coupling shall include the following components:

- a. One steel middle ring;
 - b. Two steel follower flanges;
 - c. Two molded rubber gaskets; and
 - d. Sufficient bolts and nuts to properly compress the gaskets.
- C. Coupling Size: Fit outside diameter of pipe and fittings to be coupled.
- D. Middle Rings
1. Interior of Rings: Smooth without pipe stop.
 2. Minimum Thickness: Not less than 1/4-inch
 3. Length
 - a. Standard Couplings: 5 inches or 7 inches:
 - b. Long Sleeve Couplings: 16 inches
 4. Tests: Cold-expansion, a minimum of one percent beyond the yield point and air test for porosity.
- E. Followers
1. Type: Single-piece contoured mill section welded and cold-expanded as required for the middle rings.
 2. Strength: As required to accommodate the number of bolts necessary to obtain adequate gasket pressures without excessive rolling.
 3. Shape: As required provide positive confinement of the gasket.
- F. Gaskets for Sleeve-type Couplings
1. Gaskets shall be EPDM:
- G. Bolts and Nuts
1. Bolts for Sleeve-type Couplings
 - a. Type: Track headed.
 - b. Material: AISI 316 stainless steel.
 - c. Standard: ASTM A193 or ASTM F593
 - d. Threads: Rolled thread.
 2. Nuts for Sleeve-type Couplings
 - a. Type: Hexagon head
 - b. Material: AISI 316 stainless steel
 - c. Standard: ASTM A194 or ASTM F594.
 - d. Threads: To match bolts.
- H. Restrained Joint Sleeve-Type, Steel Couplings
1. Restraint Type: Harness.
 2. Standard: Meet the requirements of the appropriate reference standard, or as shown.

- I. Pipe Preparation for Sleeve-Type Couplings
 1. Pipe End Configuration: Plane ends.
 2. Pipe End Surfaces: Smooth
 3. Length of End Preparation: 12 inches from the ends of the pipe.
 4. Pipe OD Tolerance: Not more than 1/64-inch smaller than the standard outside diameter of the pipe.

2.03 REINFORCED FLEXIBLE PIPE COUPLING (EXPANSION JOINT)

- A. Manufacturers and Products
 1. Mercer Rubber Company, Flexmore Expansion Joints;
 2. Metraflex, Inc. Spool Type Expansion Joint; or
 3. Red Valve Company, Inc., Redflex Expansion Joints.
- B. Rated Working Pressure: 150 psig.
- C. Material
 1. Material shall be EPDM, with 1/8-inch hypalon cover:
- D. Maximum Temperature Rating
 1. EPDM: 250°F
- E. Coupling Flanges
 1. Type: Integrally molded.
 2. Retaining Rings
 - a. Type: Split and beveled
 - b. Material: AISI 316 stainless steel.
 3. Accessories: AISI 316 stainless steel washers at point where retaining rings are split.
 4. Flange Bolt Holes and Bolt Circle: Conform to mating flange patterns of connecting piping.
- F. Control Units
 1. Manufacturer: Same as coupling manufacturer.
 2. Requirement: Provide with all flexible pipe couplings.
 3. Material: AISI 316 stainless steel.

2.04 FLANGE-MECHANICAL JOINT ADAPTERS

- A. Manufacturers and Products
 1. Dresser Style 127;
 2. Smith-Blair Type 912;
 3. Or equal flange-mechanical joint adapters.
- B. Working Pressure Rating: 150 psi, minimum.

- C. Adapter Material: Cast Iron.
- D. Casting Standard: ASTM A126.
- E. Flange Joint
 - 1. Flange Standard: ANSI/AWWA C110/A21.10.
 - 2. Dimension Standard for Flange: ANSI B16.1, Class 125.
 - 3. Flange Joint Gasket
 - a. Configuration: Solid ring shaped to seal against machined face of pipe, fitting, or valve flange.
 - b. Seat: Gasket shall be secured in machined groove in face of adapter flange.
 - c. Material
 - 1) Gaskets shall be EPDM:
- F. Mechanical Joint
 - 1. Mechanical Joint Standard: ANSI/AWWA C111/A21.11
 - 2. Mechanical Joint Gasket:
 - a. Configuration: Solid ring shaped to seal against pipe when compressed by adapter follower.
 - b. Gaskets Standard: ANSI/AWWA C111/A21.11.
- G. Bolts and Nuts
 - 1. Bolts for Flange-Mechanical Joint Adapters
 - a. Type: Track headed.
 - b. Material: AISI 316 stainless steel.
 - c. Standard: ASTM A193 or ASTM F593
 - d. Threads: Adapter manufacturer's standard.
 - 2. Nuts for Flange-Mechanical Joint Adapters
 - a. Type: Hexagon head
 - b. Material: AISI 316 stainless steel
 - c. Standard: ASTM A194 or ASTM F594.
 - d. Threads: To match bolts.

2.05 FLANGE-PLAIN END COUPLING ADAPTERS

- A. Manufacturers and Products
 - 1. Romac RFCA;
 - 2. Or equal

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Install sleeves, adapters, couplings, and appurtenances as specified in this Section and in Section 33 36 13.04 Piping Installation – General.

3.02 JOINING PIPE WITH SLEEVE TYPE COUPLINGS

A. Pipe Preparation for Sleeve Type Couplings

1. Ductile Iron Pipe

- a. Remove lumps, blisters, and excess bituminous coating from plain end of ductile iron pipe and fitting, and wire brush outside of ductile iron pipe.
- b. Length of ductile iron pipe end preparation shall not be less than 12 inches from end of pipe.
- c. Ductile iron pipe OD shall not be more than 1/64-inch smaller than the standard outside diameter of ductile iron pipe.

2. PVC Pipe

- a. Remove dirt, debris, and other deleterious substances from plain end of PVC pipe, and wipe end of pipe dry.
- b. Length of PVC pipe end preparation shall not be less than 12 inches from end of pipe.
- c. PVC pipe OD shall not be more than 1/64-inch smaller than the standard outside diameter of PVC pipe.

3. Asbestos-Cement Pipe Spigot for Asbestos-Cement to Ductile Iron Transition Couplings and for Asbestos-Cement to PVC Transition Couplings

- a. Only connect to machined spigot end of existing asbestos-cement pipe.
- b. Do not connect to existing asbestos-cement pipe barrel.
- c. Remove existing asbestos-cement coupling so that spigot end of asbestos-cement pipe to remain is not nicked, marred, or otherwise damaged.
- d. Clean spigot end of asbestos-cement pipe prior to installation of transition coupling.

B. Cleaning Sleeve Type Couplings

- 1. Wash and wipe coupling clean of dirt, oil, grease, and other foreign matter.
- 2. Wipe coupling dry.
- 3. Wipe each gasket clean of dirt, dust, and other foreign matter.

C. Joining Pipe with Sleeve Type Couplings

- 1. Brush pipe and gaskets with soapy water.
- 2. Slip coupling gland on end of each pipe with gland extension toward the end of pipe.
- 3. Place coupling rubber gasket on end of each pipe with thick edge of gasket toward gland.
- 4. Place coupling sleeve over the end of one of the pipes being joined.
- 5. Align ends of pipe being joined.

6. Adjust coupling sleeve and gaskets so that gaskets are equal distance from both pipe ends.
7. Move coupling glands into position against gasket faces.
8. Loosely assemble coupling bolts and nuts.
9. Evenly tighten bolts and nuts.
10. Tighten bolts and nuts so that coupling joints will not leak.
11. Do not over-torque bolts and nuts.
12. Bring pipe and coupling to correct line and grade. Do not exceed deflection limits recommended by coupling manufacturer.
13. Secure buried pipe and couplings with haunching and backfill specified in Section 31 23 43 Pipe Haunching and Backfill.

3.03 REINFORCED FLEXIBLE PIPE COUPLING (EXPANSION JOINT) JOINTS

- A. Flange joints for reinforce flexible piping couplings shall meet the requirements of appropriate individual piping material section.

3.04 FLANGE-MECHANICAL JOINT ADAPTER JOINTS

- A. Flange joint for flange-mechanical joint adapter shall meet the requirements of appropriate individual piping material section.
- B. Mechanical joint for flange-mechanical joint adapter shall meet the requirements of appropriate individual piping material section.

3.05 FLANGE-PLAIN END COUPLING ADAPTERS

- A. Install flange-plain end adapters in accordance with manufacturer's written instructions and as specified in this Article.
- B. Flange joint for flange-plain end adapter shall meet the requirements of appropriate individual piping material section.
- C. Torques set screws in accordance with adapter manufacturer's written instructions. Set screw torque values shall be in accordance with adapter manufacturer's written instructions.

3.06 MANUFACTURERS' REPRESENTATIVE

- A. Provide services of sleeve and adapter manufacturers' representative as required to obtain correct installation of sleeves, adapters, and accessories.
- B. Provide assistance of manufacturers' representatives at no additional cost to the Owner.

END OF SECTION 33 36 43.53

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CITY OF NORTH PORT HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS CITY OF NORTH PORT CONTRACT 2018-05

BOARD OF CITY COMMISSIONERS

- Vanessa Carusone - SEAT #1 - MAYOR
- Christopher Hanks - SEAT #2 - COMMISSIONER
- Debbie McDowell - SEAT #3 - COMMISSIONER
- Jill Luke - SEAT #4 - COMMISSIONER
- Linda Yates - SEAT #5 - VICE-MAYOR

CITY MANAGER

PETER LEAR

DIRECTOR OF UTILITIES

RICK NEWKIRK

DRAWING INDEX

- G-001 COVER
- G-002 LEGEND, SYMBOLS, ABBREVIATIONS
- D-101 DEMOLITION PLAN
- D-102 IMPROVEMENT PLAN & SECTIONS (DI PIPING)
- D-103 IMPROVEMENT PLAN (STAINLESS STEEL PIPING)
- D-501 STANDARD DETAILS



LOCATION MAP

OCTOBER 2018

ISSUED FOR 90% DESIGN



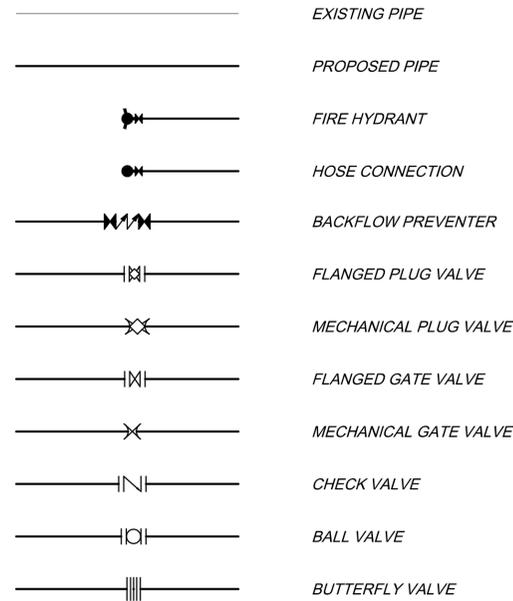
Douglas H. Eckmann, PE Date
Florida Registration No. 47259

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 Plotted By: Sherin Mansour
 Layout: X#

PIPING SYSTEM ABBREVIATIONS

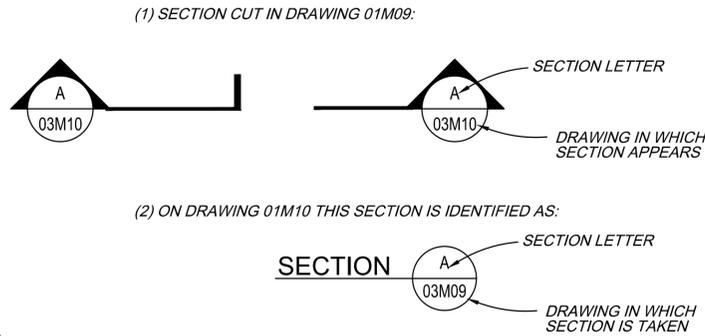
ACID	ACID WASTE PLUMBING, ALKALINE WASTE PIPING
AEIN	AERATION INFLUENT
ALUM	ALUMINUM
BDRN	BUILDING STORM WATER DRAIN SYSTEM
BKWS	BACKWASH SUPPLY
BKWW	BACKWASH WASTE
CCTE	CHLORINE CONTACT EFFLUENT
CCTI	CHLORINE CONTACT INFLUENT
CHDR	CHEMICAL DRAIN
CL2G	CHLORINE GAS
CL2S	CHLORINE SOLUTION
CLEF	CLAIRIFIER EFFLUENT
CMPA	COMPRESSED AIR
DISL	DIGESTED SLUDGE
DOMW	POTABLE WATER PLUMBING
EMOF	EMERGENCY OVERFLOW
ENGE	ENGINE EXHAUST
EXHS	EXHAUST SYSTEM DUCT
FAIN	FIRST ANOXIC INFLUENT
FIRE	WATER SYSTEM DEDICATED TO FIRE PROTECTION
FLAS	FILTER AIR SCOUR
FLBP	FILTER BYPASS
FLEF	FILTER EFFLUENT
FLIN	FILTER INFLUENT
FULR	FUEL RETURN
FULS	FUEL SUPPLY
GRIT	GRIT
IRRG	IRRIGATION
LGAS	LABORATORY GAS
LPGS	FUEL RETURN
LPRA	LOW PRESSURE AIR, PROCESS AIR, AERATION AIR
METH	METHANOL
MXLQ	MIXED LIQUOR
NACS	SODIUM HYPOCHLORITE SOLUTION
NGAS	NATURAL GAS
NPOT	NON-POTABLE WATER
ODOR	ODOR CONTROL, SCRUBBER DUCT
POLN	NEAT POLYMER
POLS	POLYMER SOLUTION
POTW	POTABLE WATER
PWTR	PLANT WATER SUPPLY
RASL	RETURN ACTIVATED SLUDGE
REEF	REAERATION EFFLUENT
REIN	REAERATION INFLUENT
REJW	REJECT WATER
RESP	REUSE (RECLAIMED) WATER SUPPLEMENTAL SUPPLY
REUS	REUSE (RECLAIMED) WATER
RWTR	RAW WATER (WELL WATER)
SAEF	SECOND ANOXIC EFFLUENT
SAIN	SECOND ANOXIC INFLUENT
SANR	SANITARY WASTE PLUMBING
SCUM	SCUM
SDHS	SODIUM HYDROXIDE SOLUTION
SO2G	SULFUR DIOXIDE GAS
SO2S	SULFUR DIOXIDE SOLUTION
SSWR	SANITARY SEWER
STDN	PUMPING STATION AND TREATMENT FACILITY DRAIN SYSTEMS
STRM	STORM SEWER
SUPN	SUPERNATANT
THSL	THICKENED SLUDGE
WASL	WASTE ACTIVATED SLUDGE
WWTR	RAW WASTEWATER, PARTIALLY TREATED WASTEWATER

SINGLE LINE PIPING

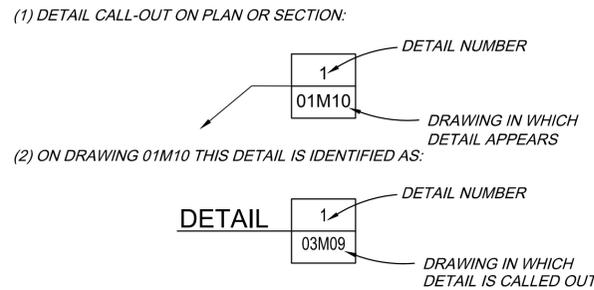


P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
F.I.R.	FOUND IRON ROD
S.I.R.	SET 5/8" IRON ROD WITH CAP, L.B.#734
F.C.M.	FOUND CONCRETE MONUMENT
S.C.M.	SET CONCRETE MONUMENT WITH ALUMINUM DISK, L.B.#734
F.P.K.	FOUND PARKER KALON NAIL
S.P.K.	SET PARKER KALON NAIL WITH BRASS DISK, L.B.#734
FND.	FOUND
(P)	PLAT
(M)	MEASURED
(C)	CALCULATED
P.B.	PLAT BOOK
PG.	PAGE
O.R.	OFFICIAL RECORDS BOOK
CBS	CONCRETE, BLOCK & STUCCO
R/W	RIGHT-OF-WAY
EOP	EDGE OF PAVEMENT
C.B.	CATCH BASIN
T.S.B.	TRAFFIC SIGNAL BOX
G.A.	GUIDE ANCHOR
S.M.H.	SANITARY MANHOLE
D.M.H.	DRAINAGE MANHOLE
CONCRETE	CONCRETE
F.P.L.	FLORIDA POWER & LIGHT TRANSFORMER
H.W.	CONCRETE HEAD WALL
*	TRAFFIC SIGN
●	CONCRETE LIGHT POLE
⊕	WATER METER
⊕	WATER VALVE
⊕	YARD DRAIN
⊕	SEWER CLEAN OUT
+	SEWER VALVE
⊕	ELECTRIC SPLICE BOX
⊕	ELECTRIC SERVICE BOX
⊕	FIRE HYDRANT
⊕	BENCH MARK
⊕	UNITED TELEPHONE SERVICE
U.T.S.	UNITED TELEPHONE SERVICE
B.F.P.	BACKFLOW PREVENTOR
W.P.P.	WOOD POWER POLE
M.E.S.	MITER END SECTION
R.C.P.	REINFORCED CONCRETE PIPE
RES	RESIDENCE
CBS	CONCRETE BLOCK STRUCTURE
L.B.	LICENSED BUSINESS
P.S.M.	PROFESSIONAL SURVEYOR AND MAPPER
LS	LIFT STATION

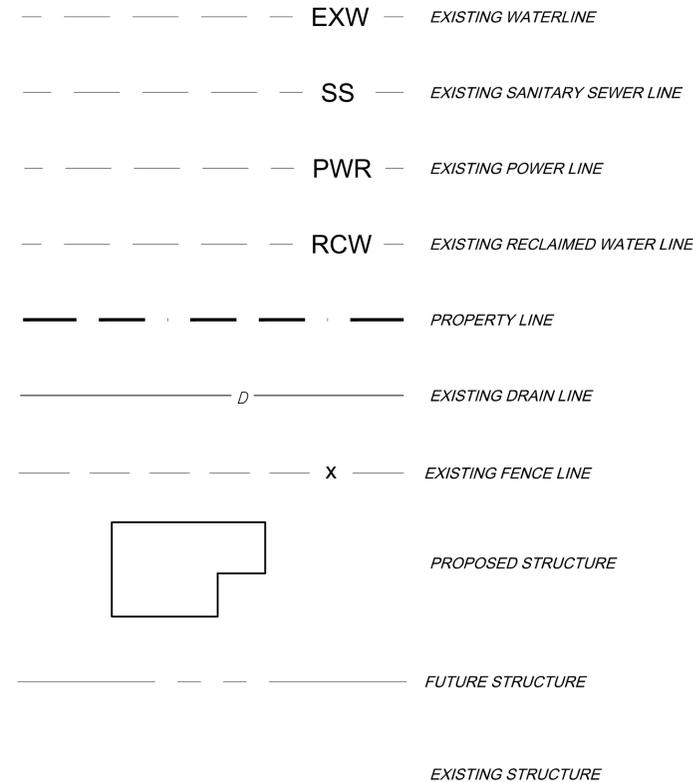
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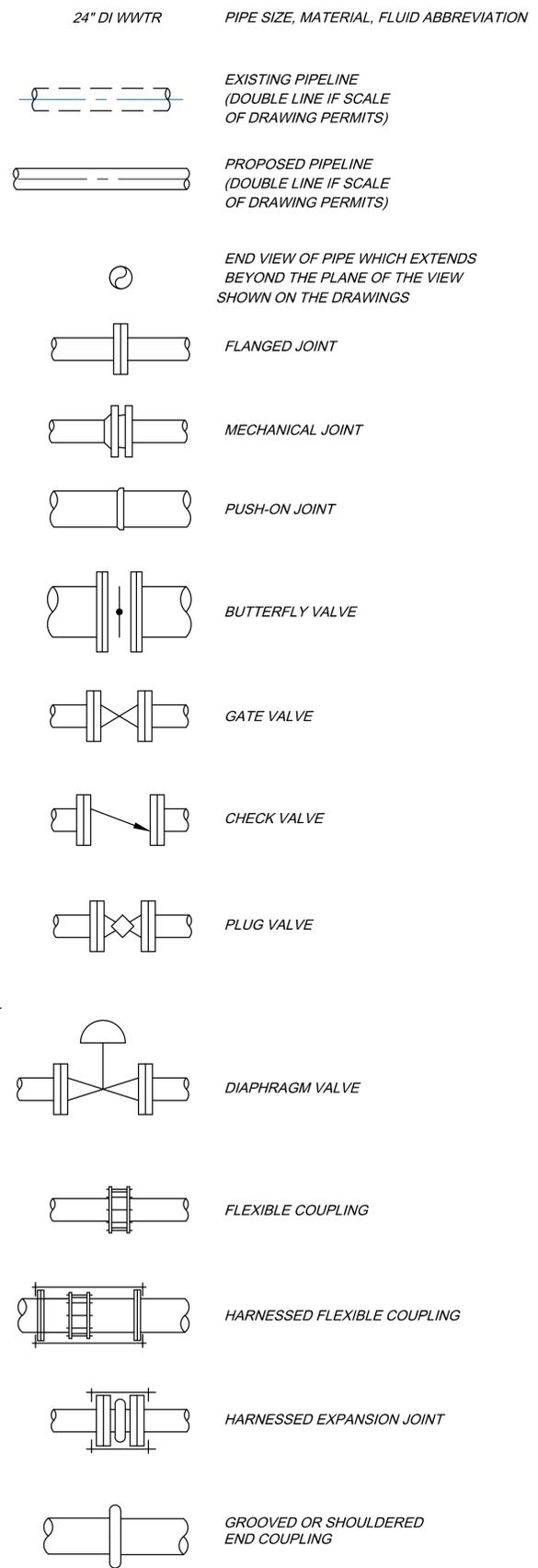
DETAIL IDENTIFICATION



SITE WORK

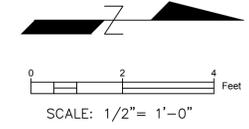


DOUBLE LINE PIPING



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Consultant		
Owner		
 CITY OF NORTH PORT UTILITIES		
Project		
CITY OF NORTH PORT HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS		
Issued For		
90% DESIGN		
Issued On: OCTOBER 2018		
Revisions		
REV. NO.	DATE	DESCRIPTION
△		
△		
△		
△		
△		
 BAR MEASURES 1 INCH ON FULL SIZE DRAWING		
Engineer		
Douglas H. Eckmann, PE		Date
Florida Registration No. 47259		
Drawing Data		
SCALE: AS SHOWN		
DRAWN BY: SMR		
CHECKED BY: DHE		
Drawing Title		
LEGEND, SYMBOLS AND ABBREVIATIONS		
Drawing Number		
<h1 style="text-align: center;">G-002</h1>		
SHEET --- OF 08 ---		
TKW Project No.: 16919.07		



TKW
CONSULTING ENGINEERS
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Fort Myers, Florida 33912
TEL: 239.278.1992 • FAX: 239.278.0922
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Engineering Certification # 5762

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Consultant

Owner

NorthPort
FLORIDA
CITY OF NORTH PORT UTILITIES

Project

**CITY OF NORTH PORT
HILLSBOROUGH BOOSTER
PUMP STATION
IMPROVEMENTS**

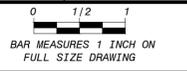
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Issued On: **OCTOBER 2018**

Revisions

REV. NO.	DATE	DESCRIPTION
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Engineer

Douglas H. Eckmann, PE Date
Florida Registration No. 47259

Drawing Data

SCALE: AS SHOWN
DRAWN BY: SMR
CHECKED BY: DHE

Drawing Title

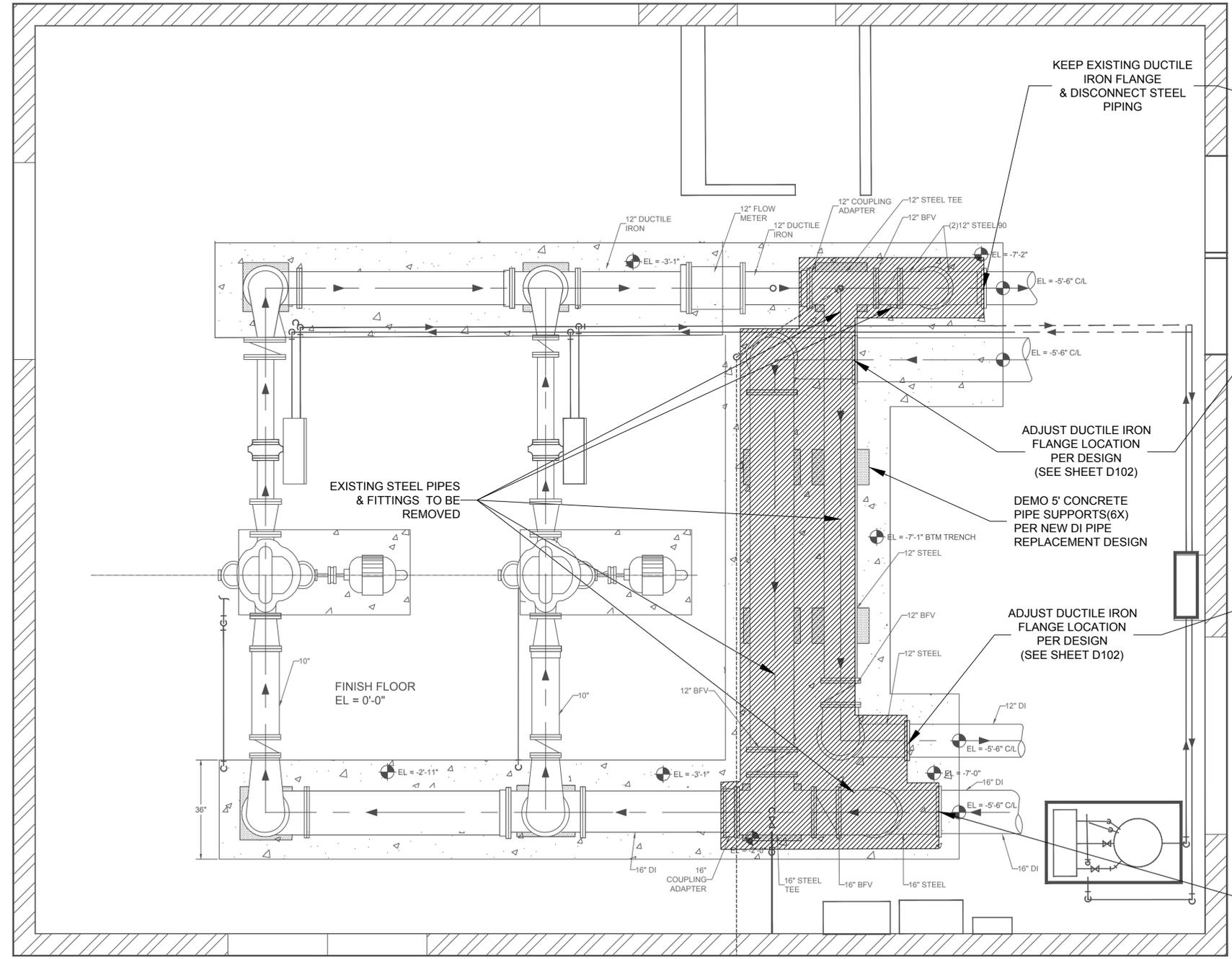
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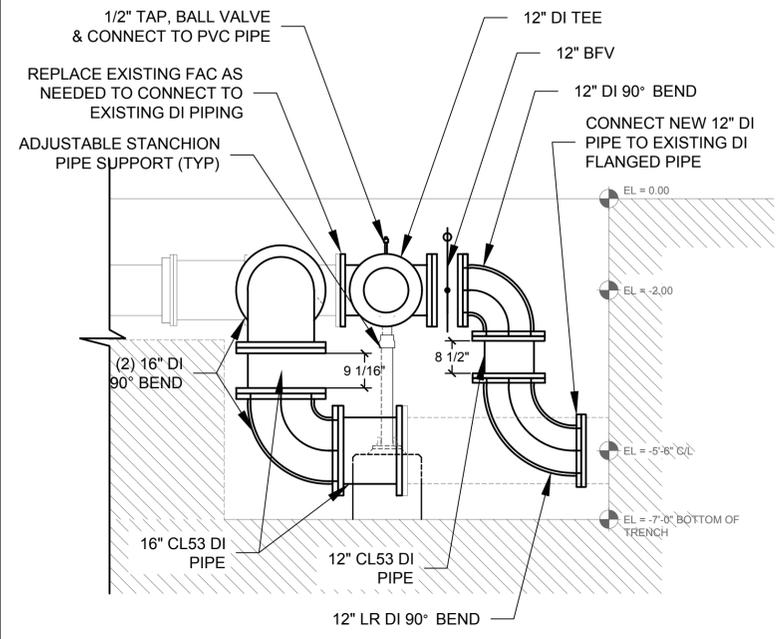
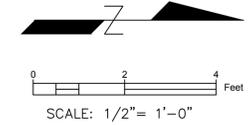
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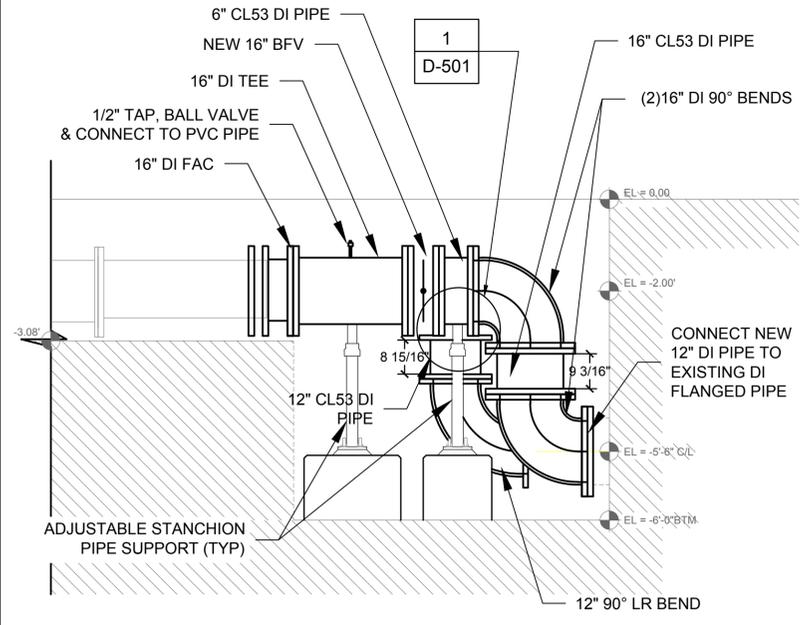
TKW Project No.: 16919.07



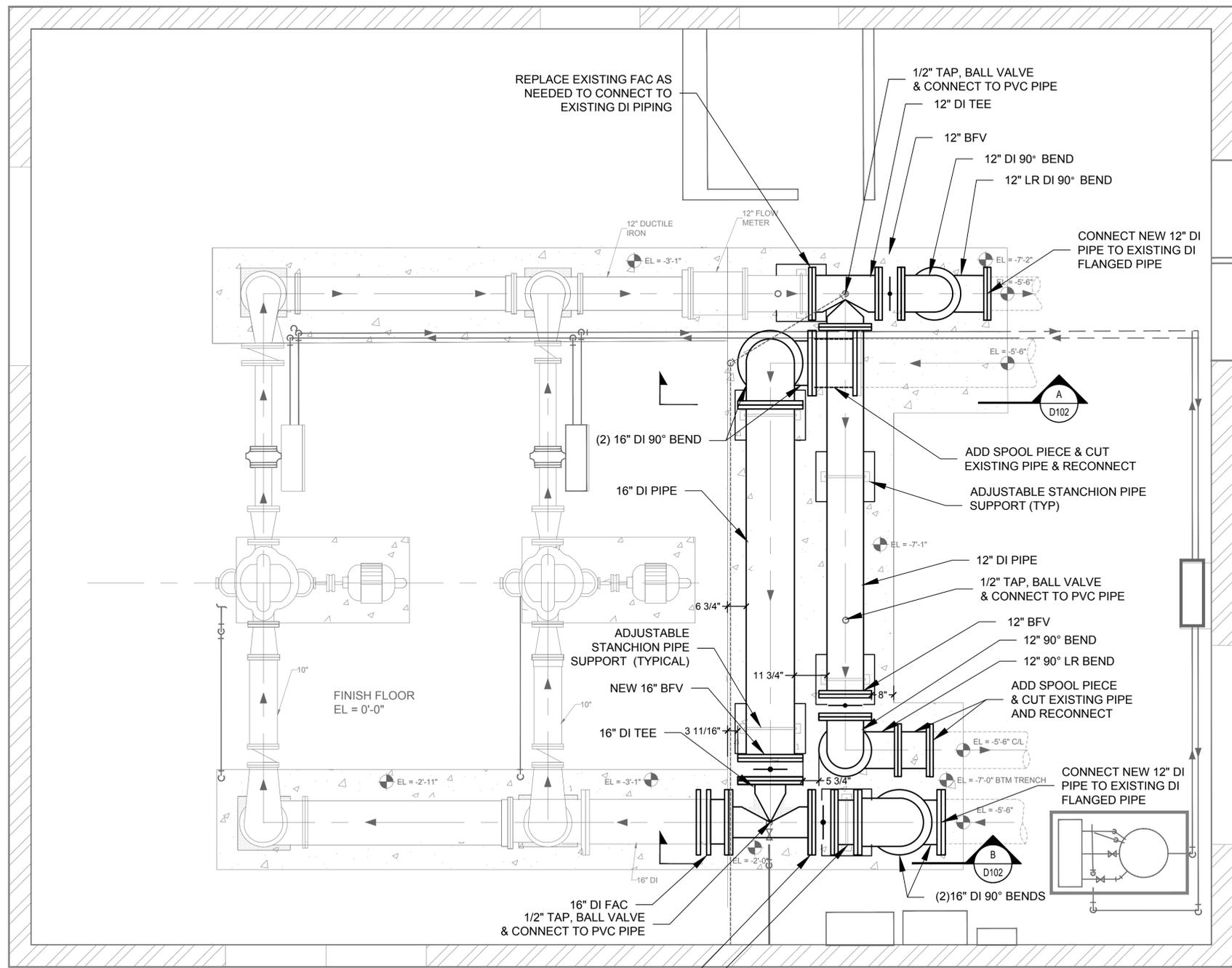
KEEP EXISTING DUCTILE IRON FLANGE & DISCONNECT STEEL PIPING



SECTION A
SCALE 1/2"=1'



SECTION B
SCALE 1/2"=1'



PLAN
SCALE 1/2"=1'



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Consultant

Owner

CITY OF NORTH PORT UTILITIES

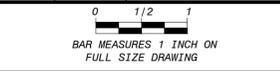
Project
CITY OF NORTH PORT
HILLSBOROUGH BOOSTER
PUMP STATION
IMPROVEMENTS

Issued For
90% DESIGN

Issued On: OCTOBER 2018

Revisions

REV. NO.	DATE	DESCRIPTION
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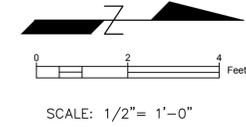
Engineer
Douglas H. Eckmann, PE
Date
Florida Registration No. 47259

Drawing Data
SCALE: AS SHOWN
DRAWN BY: SMR
CHECKED BY: DHE

Drawing Title
IMPROVEMENT PLAN
& SECTIONS
(DUCTILE IRON PIPING)

Drawing Number
D-102

SHEET --- **OF** 08 ---
TKW Project No.: 16919.07



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Engineering Certification # 5762

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Consultant

Owner



CITY OF NORTH PORT UTILITIES

Project

**CITY OF NORTH PORT
HILLSBOROUGH BOOSTER
PUMP STATION
IMPROVEMENTS**

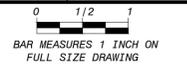
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Revisions

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Engineer

Douglas H. Eckmann, PE Date
Florida Registration No. 47259

Drawing Data

SCALE: AS SHOWN
DRAWN BY: SMR
CHECKED BY: DHE

Drawing Title

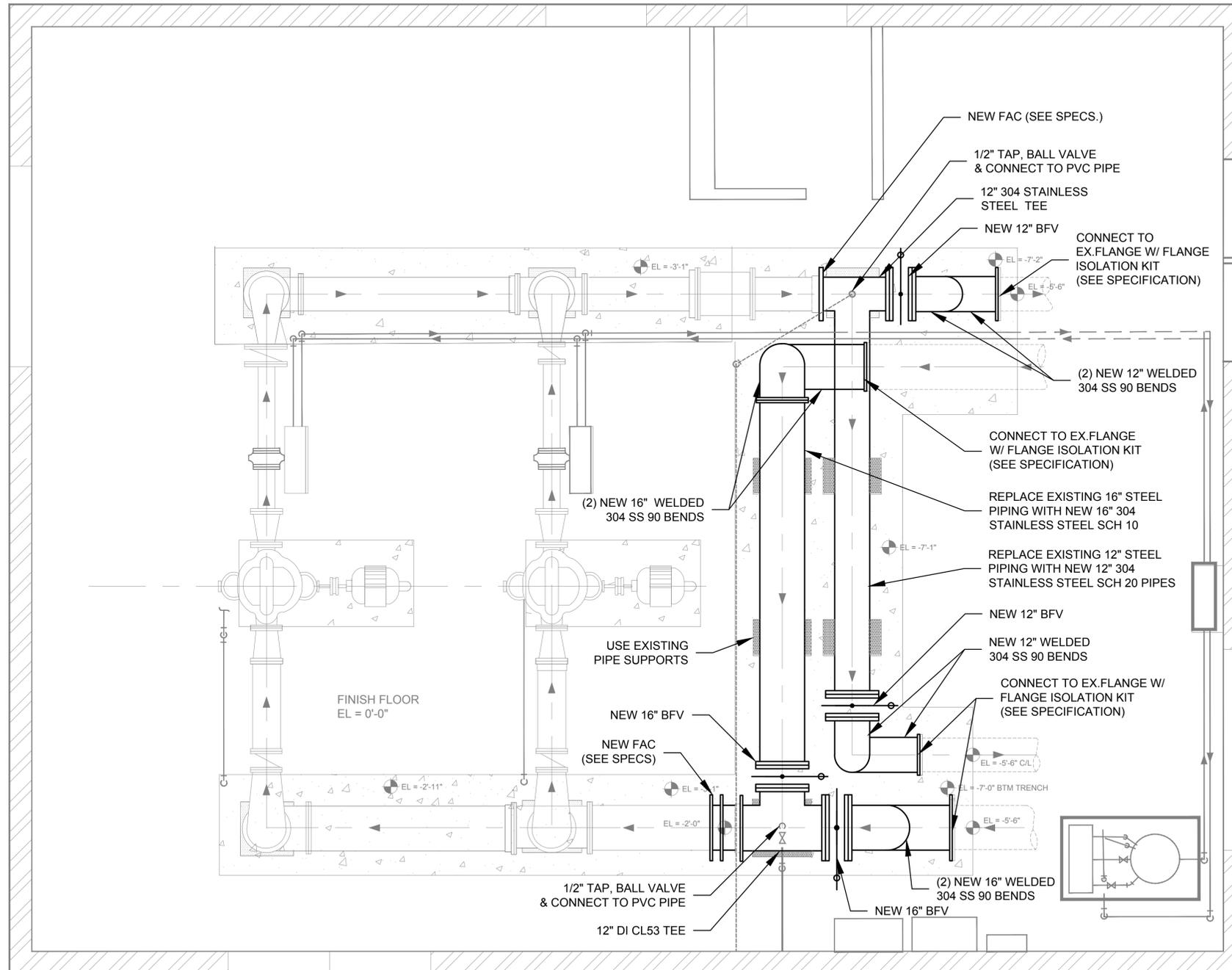
**IMPROVEMENT PLAN
(STAINLESS STEEL
PIPING)**

Drawing Number

D-103

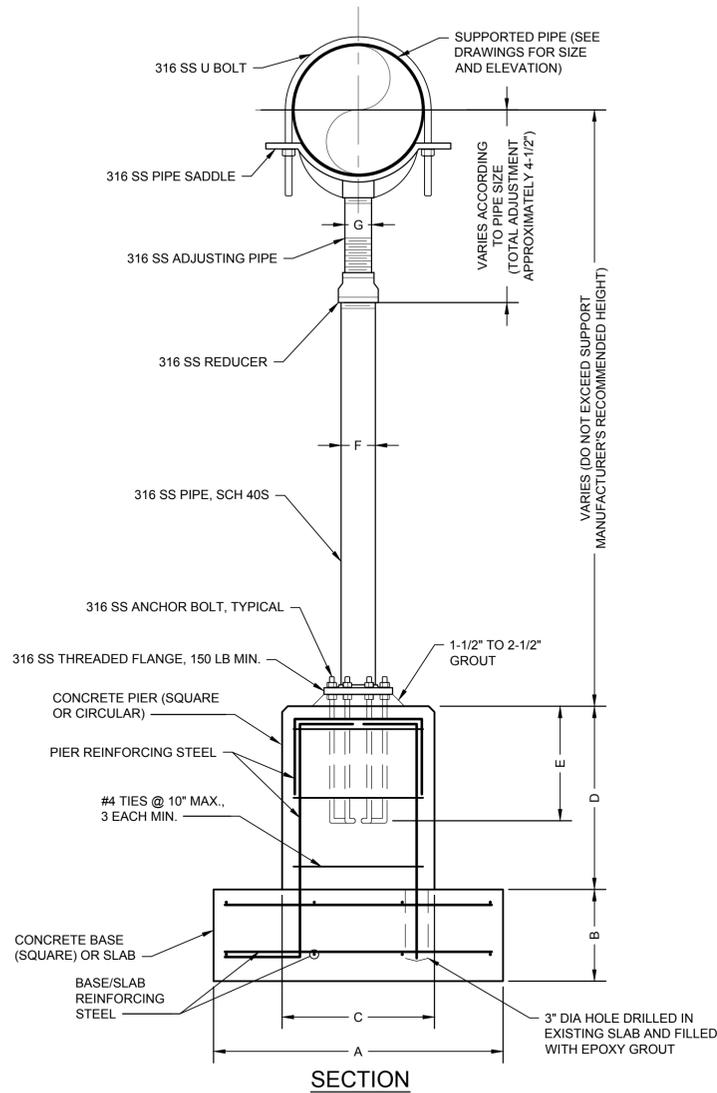
SHEET --- OF 08 ---

TKW Project No.: 16919.07



ADJUSTABLE STANCHION TYPE PIPE SUPPORT NOTES:

1. EXTEND CONCRETE PIER WITH BURIED BASE SO THAT TOP OF PIER IS NOT LESS THAN 2" ABOVE FINISH GRADE.
2. INCREASE DEPTH OF BASE IF PIER HEIGHT REQUIRED TO EXTEND TOP OF PIER TO 2" ABOVE FINISH GRADE EXCEEDS MAXIMUM PIER HEIGHT SHOWN IN SCHEDULE.
3. DO NOT USE THIS DETAIL IF ALLOWABLE SOIL BEARING PRESSURE IS LESS THAN 1,500 POUNDS PER SQUARE FOOT.

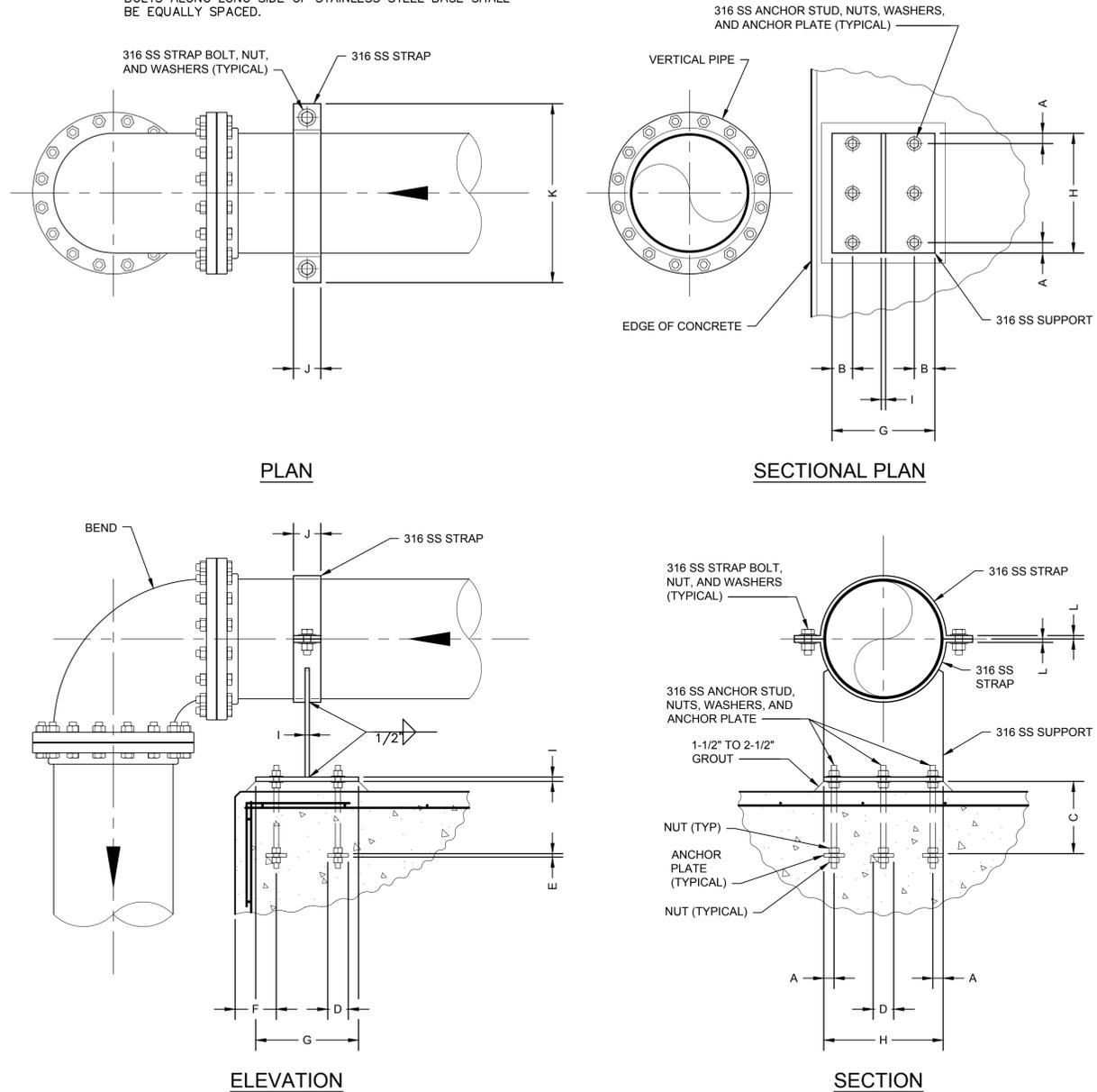


NOMINAL PIPE DIAMETER	CONCRETE BASE			CONCRETE PIER				STAINLESS STEEL ANCHOR BOLTS		STAINLESS STEEL STANCHION PIPE	
	DIMENSIONS		REINFORCING STEEL (U.O.N.)	DIMENSIONS		REINF. STEEL (U.O.N.)	SIZE	"E" (MIN.)	"F"	"G"	
	"A" (MIN.)	"B" (MIN.)		"C"	"D" (MIN.) (MAX.)						
4"	32"	10"	#5@12"E.W.	14"	17"	48"	4 #7	5/8"	15"	4"	3"
6"	33"	10"	#5@12"E.W.	15"	17"	48"	4 #7	5/8"	15"	4"	3"
8"	36"	10"	#5@12"E.W.	18"	17"	60"	8 #6	5/8"	15"	4"	3"
10"	36"	10"	#5@12"E.W.	18"	17"	60"	8 #6	5/8"	15"	4"	3"
12"	38"	10"	#5@12"E.W.	20"	17"	60"	8 #7	5/8"	15"	4"	3"
14"	38"	10"	#5@12"E.W.	20"	17"	60"	8 #7	5/8"	15"	4"	3"
16"	38"	10"	#5@12"E.W.	20"	17"	72"	8 #7	5/8"	15"	4"	3"
18"	42"	12"	#5@12"E.W.,E.F.	24"	20"	72"	8 #8	3/4"	18"	6"	3-1/2"
20"	42"	12"	#5@12"E.W.,E.F.	24"	20"	72"	8 #8	3/4"	18"	6"	3-1/2"
24"	42"	15"	#5@12"E.W.,E.F.	24"	20"	72"	8 #8	3/4"	18"	6"	4"
30"	42"	15"	#5@12"E.W.,E.F.	24"	20"	72"	8 #8	3/4"	18"	6"	4"
36"	42"	15"	#5@12"E.W.,E.F.	24"	20"	72"	8 #8	3/4"	18"	6"	4"

DETAIL 01 - ADJUSTABLE STANCHION TYPE PIPE SUPPORT
NTS

UPLIFT RESTRAINT PIPE SUPPORT NOTES:

1. SEE STRUCTURAL DRAWINGS FOR REINFORCED CONCRETE ANCHOR STRUCTURE OR BASE.
2. DO NOT USE THIS DETAIL IF WORKING PRESSURE OR TEST PRESSURE EXCEEDS 150 PSI.
3. DIMENSION "A" SHALL NOT EXCEED DIMENSION "B". ANCHOR BOLTS ALONG LONG SIDE OF STAINLESS STEEL BASE SHALL BE EQUALLY SPACED.



NOMINAL PIPE DIAMETER	STAINLESS STEEL ANCHOR STUDS							STAINLESS STEEL SUPPORT			STAINLESS STEEL STRAP			STAINLESS STEEL STRAP BOLTS			
	QUAN.	SIZE	"A" (MIN.)	"B"	"C" (MIN.)	"D"	"E"	"F" (MIN.)	"G"	"H"	"I"	"J"	"K"	"L"	QUAN.	SIZE	LENGTH
4"	4	1/2"	1.0"	2.000"	12.0"	2.0"	0.375"	5.5"	10"	10"	0.625"	2"	10"	0.250"	2	1/2"	1.75"
6"	4	1/2"	1.0"	2.000"	12.0"	2.0"	0.375"	5.5"	10"	10"	0.625"	2"	12"	0.250"	2	1/2"	1.75"
8"	4	1/2"	1.0"	2.000"	12.0"	2.0"	0.375"	5.5"	10"	10"	0.625"	2"	14"	0.250"	2	1/2"	1.75"
10"	4	1/2"	1.0"	2.000"	12.0"	2.0"	0.375"	5.5"	10"	10"	0.625"	3"	18"	0.375"	2	3/4"	2.50"
12"	4	1/2"	1.0"	2.375"	12.0"	2.0"	0.375"	6.0"	12"	12"	0.625"	3"	20"	0.375"	2	3/4"	2.50"
14"	4	3/4"	1.5"	2.750"	18.0"	3.0"	0.500"	6.5"	14"	14"	0.625"	3"	23"	0.375"	2	3/4"	2.50"
16"	6	3/4"	1.5"	3.000"	18.0"	3.0"	0.500"	6.5"	15"	16"	0.625"	4"	26"	0.500"	2	1"	3.00"
18"	6	3/4"	1.5"	3.000"	18.0"	3.0"	0.500"	6.5"	15"	18"	0.625"	4"	28"	0.500"	2	1"	3.00"
20"	6	3/4"	1.5"	3.000"	18.0"	3.0"	0.500"	6.5"	15"	18"	0.625"	8"	31"	0.500"	4	1"	3.00"
24"	6	1"	2.0"	3.000"	24.0"	4.0"	0.625"	7.5"	15"	21"	0.750"	8"	35"	0.500"	4	1"	3.00"
30"	6	1"	2.0"	3.000"	24.0"	4.0"	0.625"	7.5"	15"	27"	0.750"	12"	41"	0.500"	6	1"	3.00"
36"	8	1"	2.0"	3.000"	24.0"	4.0"	0.625"	7.5"	15"	32"	0.750"	15"	49"	0.625"	6	1-1/4"	3.50"
42"	8	1-1/4"	2.5"	3.000"	27.0"	5.0"	0.750"	9.5"	15"	37"	0.750"	20"	55"	0.625"	8	1-1/4"	3.50"
48"	8	1-1/4"	2.5"	3.000"	27.0"	5.0"	0.750"	9.5"	15"	42"	0.750"	24"	63"	0.750"	8	1-1/2"	4.00"

DETAIL 02 - UPLIFT RESTRAINT PIPE SUPPORT
NTS

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Consultant

Owner



CITY OF NORTH PORT UTILITIES

Project

**CITY OF NORTH PORT
HILLSBOROUGH BOOSTER
PUMP STATION
IMPROVEMENTS**

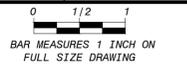
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Revisions

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Engineer

Douglas H. Eckmann, PE Date
Florida Registration No. 47259

Drawing Data

SCALE: AS SHOWN
DRAWN BY: SMR
CHECKED BY: DHE

Drawing Title

PIPE SUPPORT DETAIL

Drawing Number

D-501

SHEET --- OF 08 ---

TKW Project No.: 16919.07



North Port Utilities Approved Material List

Updated 6-1-2018

1. DUCTILE IRON PIPE
 - a. American
 - b. McWane
 - c. U.S. Pipe and Foundry

2. PVC PIPE FORCE MAIN DR 18(Green)
 - a. Certainteed/North American Pipe Company
 - b. J-M Manufacturing
 - c. Diamond
 - d. National Pipe & Plastics

3. PVC PIPE GRAVITY DR26(Green)_
 - a. Certainteed/North American Pipe Company
 - b. J-M Manufacturing
 - c. Diamond
 - d. National Pipe & Plastics

4. PVC PIPE WATERMAIN DR 18(Blue)
 - a. Certainteed/North American Pipe Company
 - b. J-M Manufacturing
 - c. Diamond
 - d. National Pipe & Plastics

5. PVC PIPE for Conflicts DR14
 - a. Certainteed/North American Pipe Company
 - b. J-M Manufacturing
 - c. Diamond
 - d. National Pipe & Plastics

6. POLYTUBING
 - a. Endot

7. GATEVALVES
 - a. Mueller
 - b. Clow/Kennedy
 - c. American



8. BUTTERFLY VALVES
 - a. Mueller
 - b. Clow/Kennedy
 - c. Valvematic

9. PLUG VALVES
 - a. Valmatic
 - b. Pratt

10. TAP VALVES
 - a. American
 - b. Mueller

11. CHECK VALVES
 - a. American
 - b. Mueller

12. AIR RELEASE VALVES
 - a. A.R.I. D-040 or A.R.I. D-025 (sewer specific)
 - b. Valve Matic
 - c. Apco-air vent valve

13. CURB STOPS(no set screw styles)
 - a. Ford
 - b. Mueller

14. CORP STOPS(no set screw styles)
 - a. Ford
 - b. Mueller

15. ANGLE VALVES(no set screw styles)
 - a. Ford
 - b. Mueller

16. U-Branches
 - a. Ford
 - b. Mueller



17. MJ FITTINGS

- a. U.S. Pipe and Foundry
- b. American Cast Iron Pipe
- c. Tyler Union
- d. SIP Industries
- e. Star Pipe Products

18. FIRE HYDRANTS

- a. Mueller
- b. Clow Medallion
- c. Kennedy
- d. American

19. TAP SLEEVES(Stainless steel only)

- a. Ford
- b. JCM – 432
- c. Cascade
- d. American
- e. TPS

20. TAP SADDLES(Epoxy coated w/double straps)

- a. Smith-Blair
- b. Mueller
- c. Ford
- d. JCM
- e. TPS

21. BLOWOFFS

- a. Kupperle TF550
- b. Hydroguard- Automatic Blowoff

22. METER BOXES

- a. CDR
- b. Polyplastics
- c. Carson Brooks
- d. NDS
- e. Glasmasters



23. VALVE BOXES
 - a. Tyler Union
 - b. Russco
 - c. Opelika Foundry
 - d. SIP Industries

24. PERMANENT SAMPLING POINTS
 - a. Kupperle Foundry- Eclipse 88

25. POLYETHYLENE ENCLOSURES
 - a. LJ Ruffin

26. BRASS VALVE MARKER TAGS
 - a. Wagco Markers

27. BELL RESTRAINTS
 - a. Ford Uniflange
 - b. Ebaa-Iron series 1500
 - c. Sigma
 - d. SIP Industries –EZ Grip PTP Series

28. UNI FLANGES
 - a. Ford UFR 1390s-x

29. RESTRAINTS
 - a. Sigma series 3000,4000
 - b. Stargrip
 - c. Ebaa Iron series 2000 PV Megalug
 - d. SIP Industries EZ Grips

30. GRAVITY SEWER FITTINGS
 - a. Harco
 - b. Tigre, USA

31. CLEANOUT COVER
 - a. U.S. Foundry

32. HDPE to DUCTILE IRON ADAPTERS
 - a. Independent Pipe Products



33. LIFT STATION PUMPS

- a. FLYGT pumps

34. MANHOLE FRAMES AND COVERS

- a. U.S. Pipe and Foundry

35. CASING SPACERS (stainless steel)

- a. Cascade

36. MANHOLE and LIFT STATION WET WELL SURFACE COATINGS (for any manholes with force main discharged into them including the next one downstream, any drop manholes, lift stations and the two manholes upstream from any lift station)

- a. I.E.T Systems
- b. Raven 405
- c. Green Monster Liner (GML)

37. LIFT STATION PANEL

- a. FLYGT (per the North Port Utility Specs)

38. SCADA SYSTEM

- a. Data Flow System (per the North Port Utility Specs)

RFB 2019-50 BID FORM OPTION A
 NORTH PORT UTILITIES
 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS	\$0.00	\$ -
4A	Install new ductile iron CL53 piping (12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Remove Concrete Pipe Supports, Install new Pipe Supports per Plan. Three (3) Taps and PVC connections	1	LS	\$0.00	\$ -
5	Install One (1) new 12" BFV, and One (1) new 16" BFV	1	LS	\$0.00	\$ -
SUB TOTAL ITEMS 3 - 5					\$ -
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$ -
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$ -
					\$ -
TOTAL COST ESTIMATE					\$ -

Date:

Signed (Person authorized to bind the company):

Name (printed): Title:

RFB 2019-50 BID FORM - OPTION B ALTERNATE
 NORTH PORT UTILITIES
 HILLSBOROUGH BOOSTER PUMP STATION IMPROVEMENTS

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
3	Remove the existing steel piping, hardware and dispose of properly.	1	LS		\$ -
4B	Install new stainless steel custom welded piping (SCH20 12" @ ~15', Four (4) 90's, One (1) Tee, One (1) FAC / SCH 10 16" @ ~13', Four (4) 90's, One (1) Tee, One (1) FAC), Re use pipe supports. Three (3) Taps and PVC connections	1	LS		\$ -
5	Install One (1) new 12" BFV, and One (1) new 16" BFV	1	LS		\$ -
SUB TOTAL ITEMS 3 - 5					\$ -
1	Mobilization (Maximum 5% of Total Base Bid)	1	LS		\$ -
2	Closeout (Minimum of 1.5% of Total Base Bid Price)	1	LS		\$ -
					\$ -
TOTAL COST ESTIMATE					\$ -

Date:

Signed (Person authorized to bind the company):
 Name (printed): Title: